FAA Safety BRIEFING

January/February 2013

Your source for general aviation news and information

AEROMEDICAL ADVANCES

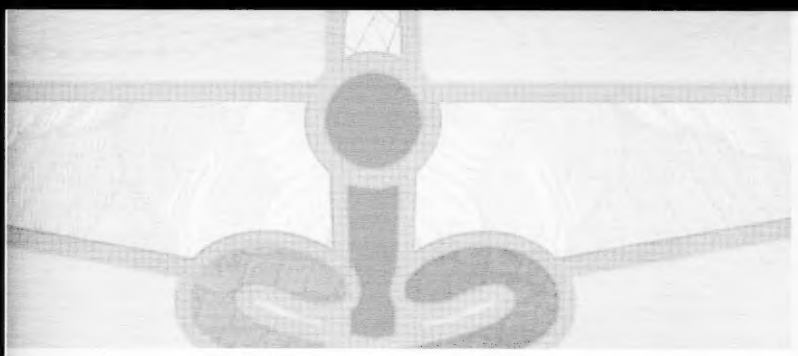
What Your Medical Can Do for You, p. 14

Take the (Med)XPress Lane, p. 20

From FDA to FAA, p. 28

Federal Aviation Administration

www.faa.gov/news/safety_briefing/



The Jan/Feb 2013 issue of FAA Safety Briefing focuses on aerospace medicine. Articles explain the FAA's responsibilities, cover key issues that affect medical certification for pilots, and discuss the pilot's role in this process.

Graphic courtesy Nick Crawford

Features

NONE FOR THE ROAD

Preventing DUI in the Sky 4

BY SABRINA WOODS

AMEING FOR EXCELLENCE

The Making of an Aviation Medical Examiner. 9

BY TOM HOFFMANN

THE RIGHT STUFF

What Kind of Medical Must I Hold? 14

BY JAMES WILLIAMS

NAVIGATING THE MEDICAL FLIGHT PATH

Special Pull-Out Infographic on the Medical Certification Process 18

BY PAUL CIANCIOLO

TAKE THE XPRESS LANE

Learn How to Fast-Track Your Airman Medical Certificate. 20

BY TOM HOFFMANN

THE EYES HAVE IT

What Pilots Should Know about Refractive Eye Surgery 24

BY SUSAN PARSON

FROM FDA TO FAA

How the FAA Evaluates Drugs for Aeromedical Use 28

BY SUSAN PARSON

Departments

Jumpseat 1

ATIS – Aviation News Roundup. 2

Aeromedical Advisory. 6

Ask Medical Certification 8

Checklist 27

Nuts, Bolts, and Electrons 31

Angle of Attack 33

Vertically Speaking 34

Flight Forum 35

Postflight 36

FAA Faces . . . . . *Inside Back Cover*

U.S. Department of Transportation

Federal Aviation Administration

ISSN: 1057-9648
FAA Safety Briefing
January/February 2013
Volume 52/Number 1

Raymond H. LaHood *Secretary of Transportation*
Michael Huerta *Acting Administrator*
Margaret Gilligan *Associate Administrator for Aviation Safety*
John M. Allen *Director, Flight Standards Service*
Dennis Pratte *Acting Manager, General Aviation and Commercial Division*
Susan Parson *Editor*
Tom Hoffmann *Managing Editor*
James R. Williams *Associate Editor / Photo Editor*
Sabrina Woods *Assistant Editor*
Paul Cianciolo *Assistant Editor*
Will Daniel Muddsimmons *Assistant Copy Editor*
Nick Crawford *Art Director*

Published six times a year, *FAA Safety Briefing*, formerly *FAA Aviation News*, promotes aviation safety by discussing current technical, regulatory, and procedural aspects affecting the safe operation and maintenance of aircraft. Although based on current FAA policy and rule interpretations, all material is advisory or informational in nature and should not be construed to have regulatory effect. Certain details of accidents described herein may have been altered to protect the privacy of those involved.

The FAA does not officially endorse any goods, services, materials, or products of manufacturers that may be referred to in an article. All brands, product names, company names, trademarks, and service marks are the properties of their respective owners. All rights reserved.

The Office of Management and Budget has approved the use of public funds for printing *FAA Safety Briefing*.

CONTACT INFORMATION

The magazine is available on the Internet at:
http://www.faa.gov/news/safety_briefing/

Comments or questions should be directed to the staff by:

- E-mailing: SafetyBriefing@faa.gov
- Writing: Editor, *FAA Safety Briefing*, Federal Aviation Administration, AFS-805, 800 Independence Avenue, SW, Washington, DC 20591
- Calling: (202) 385-9600
- Twitter: @FAASafetyBrief

SUBSCRIPTION INFORMATION

The Superintendent of Documents, U.S. Government Printing Office, sells *FAA Safety Briefing* on subscription and mails up to four renewal notices.

For New Orders: Subscribe via the Internet at http://bookstore.gpo.gov, telephone (202) 512-1800 or toll-free 1-866-512-1800, or use the self-mailer form in the center of this magazine and send to Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9371.

Subscription Problems/Change of Address: Send your mailing label with your comments/request to Superintendent of Documents, U.S. Government Printing Office, Contact Center, Washington, DC 20408-9375. You can also call (202) 512-1800 or 1-866-512-1800 and ask for Customer Service, or fax your information to (202) 512-2104.

JOHN M. ALLEN
DIRECTOR, FLIGHT STANDARDS SERVICE

Jumpseat

Medical Check Rides

No offense to the medical profession, but if you are anything like me, you probably think of dieting and going to the doctor with the same kind of "enthusiasm" you have for, say, taking a checkride in lousy weather. But we all know that just as it is important to keep your flying knowledge and skills sharp enough to pass a checkride on any given day, it is also vitally important for us flyers to keep our physical health in tip-top shape.

Monitoring and Maintenance

A key part of remaining physically healthy is an activity that is (I hope) already second-nature to the things you do to keep your airplane mechanically sound: constant monitoring and regular maintenance. Annoyed by the "weight creep" brought on by sloppy eating habits and a mostly sedentary lifestyle, I am using technology to establish new habits and better overall health. I now wear a tiny, belt-mounted device that not only tracks steps, stairs, activity, and estimated calorie burn, but also wirelessly reports that information to a companion app installed on my smartphone, tablet, and desktop computer. This level of awareness has made an enormous difference both in what I do, and what I *don't* do. For instance, I have built a lot more walking into my day. And knowing that I have to track what I eat helps me avoid the kind of mindless snacking that was making my clothing shrink. I can already see improvements and, if only because being healthy will keep me flying longer, I am firmly committed to my new habits.

Small Signs, Big Problems

Regular visits to the doctor are another important part of keeping your flying physiology in top form. One of the earliest skills that we learn as pilots is to recognize and address small signs (e.g., why is that gauge reading low?) before they become big problems (e.g., my engine just quit!).

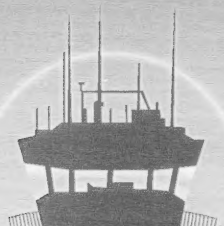
Nearly 20 years ago, I learned first-hand how the small-signs/big-problems equation also applies to human physiology. With the strong encouragement of my wife, I went to the dermatologist to see about a weird mole on my left hand. I was shocked by the diagnosis of superficial spreading melanoma, which, as you probably know, can be one of the deadliest forms of cancer. Surgery removed a lot of the muscle mass under my left wrist along with the cancer, but I was lucky. By detecting and dealing with it at a very early stage, my cancer was cured, and regular (and I do mean regular!) visits to the dermatologist have happily shown no recurrence.

By now you might be wondering about the seemingly unrelated photo that accompanies this article. Taken a dozen years ago, it shows me in a favorite spot — the left seat of a C-141C. Seated to my right was my friend and fellow pilot, Lt. Col. Matt Harlan, who had just succeeded me as Chief of Standards and Evaluation at a time when many of our aircraft had been upgraded from "steam gauges" to glass panels. We posed this "ostrich maneuver" picture to illustrate the danger of allowing all-heads-down programming.

Tragically, Matt got his own melanoma diagnosis just three years later. Unlike mine, his cancer was not detected in time for effective treatment. He succumbed to this insidious disease, leaving behind his wife, two daughters, and a host of grieving friends and colleagues.

In honor and memory of my too-soon-departed friend Matt Harlan, I want to encourage you to remember that health is hugely important to pilots, but, more fundamentally, health is life. You owe it to yourself, your family, and your friends to cherish and protect it every day.

ATIS



Aviation News Roundup

AOPA/EAA Medical Exemption Update

The FAA's Aviation Safety organization is reviewing over 16,000 public comments to a recent petition for exemption from the Aircraft Owners and Pilots Association and the Experimental Aircraft Association. AOPA and EAA (petitioning collectively on March 22, 2012) request relief for their members from some of the FAA's medical certification requirements. If the FAA granted AOPA/EAA's petition for exemption, pilots holding recreational, private, commercial, and ATP certificates would be able to fly (with specific limitations) in many GA aircraft using a medical self-assessment process that would replace the third-class medical certificate currently required in 14 CFR part 61 of the regulations.

Although the extended comment period for the petition closed on September 14, 2012, you can review the petition from AOPA/EAA and all the comments at regulations.gov, docket number FAA-2012-0350.

General Aviation Pride on Display at AOPA Summit

Balmy weather and a star-studded lineup of aviation presenters set the stage for another successful Aircraft Owners and Pilots Association (AOPA) Summit held last October in Palm Springs, Calif. The 2012 Summit included 100-plus hours of safety seminars and workshops, more than 400 booths displaying the latest pilot gear and gadgets, and a host of exciting keynote speakers including FAA Acting Administrator Michael Huerta and actor/pilot Harrison Ford. The event also featured the popular Parade of Planes where dozens of aircraft taxied from the Palm Springs International Airport and then lined the streets outside the Convention Center for the three-day event.

Next year's AOPA Summit is in Fort Worth, Texas, October 10–12, 2013. More information on the event should be available in January at www.aopa.org/summit/.

New Improvements to Lockheed Martin Flight Services

Lockheed Martin Flight Services (LMFS) recently unveiled two new tools designed to enhance safety and convenience for pilots who use LMFS to file flight plans: a new Pilot Web Portal and the Adverse Condition Alerting Service (ACAS).

The Pilot Web Portal, accessible through AFSS.com, allows pilots to file flight plans directly with LMFS and retrieve the same briefing information and weather graphics provided to LMFS specialists. It also allows pilots to add profiles based on the aircraft and routes they typically fly. The Pilot Web Portal is in the beta development stage and will continue to evolve with new features.

Pilots who register online and opt-in for ACAS via the Pilot Web Portal will receive alerts of new adverse conditions specific to their filed flight plans via text, email, and Iridium satellite devices. This can prove extremely helpful, especially with pop-up TFRs or last-minute weather changes. The alerts prompt pilots to call or radio LMFS to receive an abbreviated briefing addressing the new adverse condition.

"We know pilots may miss safety-critical information between verbal LMFS briefings," says Director of Lockheed Martin Flight Services Jim Derr. "Our new alerting service and Pilot Web Portal keep pilots up to date between voice communications with LMFS."

New Changes Improve FAASafety.gov Experience

Last fall, the FAASTeam unveiled several new updates to FAASafety.gov to improve functionality and user-friendliness. Several of the changes correct bugs and browser display issues as well as help simplify certain tasks. For example, the online course page has been redesigned, making it easier for you to use the course catalog and find any courses either in progress or completed. Employers using the AMT Awards Program can now use a new bulk upload

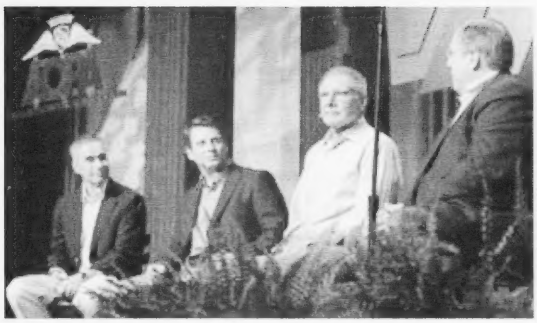


Photo by Tom Hoffmann

From R to L Craig Fuller, Harrison Ford, Tom Haines, and Robert Goyer discuss GA issues at AOPA Summit.

tool to upload annual training hours for all their employees at one time. Also, AMTs with Inspection Authorization (IA) who use online courses at FAASafety.gov for credit toward IA refresher training will now see course and credit hour information displayed on their completion certificates.

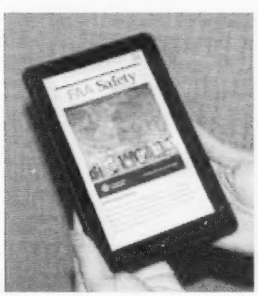
Another new feature is the addition of Really Simple Syndication (RSS) feeds for certain pages on FAASafety.gov. The RSS Feed page is located under the Resources tab from the main page.

Go to www.faasafety.gov/files/notices/2012/Oct/2012-10-31.pdf for more information on these updates.

FAA Safety Briefing Offers New E-Reader Files

An easy-to-read version of our magazine is now available as an option for viewing through an e-reader device. Unlike downloading a PDF file, the e-reader formats the text according to device settings and allows bookmarking and highlighting text.

To view on the Kindle, save the .mobi file to your computer and drop it into your Amazon store folder. To view on an Apple iOS device, either save and drop the .epub file into iTunes, or click the online link and open using the iBooks app. To view on an Android device, click the online link and open using a third-party e-reader app.



Update on Part 23 Reorganization Effort

The FAA's Small Airplane Directorate (SAD) launched the Part 23 Reorganization Aviation Rulemaking Committee (ARC) in November 2011 to improve the safety of the general aviation fleet and reduce the cost of certification. For those unfamiliar, Title 14 Code of Federal Regulations (14 CFR) part 23 contains the certification requirements for small airplanes (up to a gross weight of 19,000 pounds). The regulation has not had a complete review in over 25 years.

"Since safety-enabling technology is advancing at such a rapid pace, the time is perfect to reorganize part 23 to be ready for those technologies 20 to 25 years in the future," says Pat Mullen, the Standards Office Manager for SAD.

Today, part 23 regulations are a mix of safety requirements and methods of compliance, and can be very prescriptive in nature. The FAA plans to rewrite part 23 such that the regulations are performance-based and focus strictly on the safety requirements.

Some methods of compliance will be moved into an industry design standard, affording the FAA greater agility to address new technologies in the future without the burden of crafting new rule language. "This enables the cost-effective installation of safety enhancing technology, with a subsequent positive impact on GA safety," says Mullen.

The success of the ARC, which is well on its way of achieving greater global harmonization for part 23, is a direct result of the collaboration between FAA, industry partners, and several foreign civil aviation authorities. At press time, the FAA believes a substantial framework for the future part 23 will be complete by January 2013. An ASTM International committee was also launched in October 2012 to develop standards in support of the rulemaking effort.

Corrections

- In the article "Real Learning Through Flight Simulation" from the September/October 2012 *FAA Safety Briefing*, we indicated on page eight that you could accomplish an Instrument Proficiency Check (IPC) in a Basic Aviation Training Device. The IPC is, in fact, not allowed to be accomplished in a BATD.
- In the article "A License to Skill" from the November/December 2012 *FAA Safety Briefing*, the statement "Currently there are 145,000 FAA-certified AMTs in the U.S. If you do the math, this means there are approximately 1½ AMTs available for every GA aircraft out there," should actually have read, "If you do the math, this means there are approximately 1½ GA aircraft out there for each available AMT."

Our apologies for the errors and any confusion they might have caused.

BY SABRINA WOODS

NONE FOR THE ROAD:

Preventing DUI in the Sky

- A pilot departs into night instrument meteorological conditions and crashes. The accident site reveals a half empty bourbon bottle in the pilot's pocket. Toxicological testing reveals that the pilot's blood alcohol content (BAC) was .11 percent.
- An airplane collides with a dirt berm during an aborted landing, killing the pilot and two passengers. A bartender reports that prior to the accident, she served the pilot four alcoholic beverages, though he never seemed intoxicated. At the time of the accident, the pilot's BAC was at .30 percent.
- Witnesses watch as an airplane doing aerobatics goes straight up in the air, rolls over into a dive, and impacts the ground. The sheriff reports that the cockpit smelled strongly of alcohol and toxicology tests identify the pilot's BAC as .22 percent.
- A student pilot impacts mountainous terrain while on an unauthorized cross-country night flight. Toxicological testing reveals that the pilot had been using cocaine and two prescription narcotics prior to flight.

While researching topics for this medically-focused edition of the *FAA Safety Briefing*, I put a question to our aerospace doctors and physiologists — what topic would they most like to see us address in an article? The answer was recreational drug and alcohol abuse, and the above snippets from various accident reports show they have cause for concern.

Flying Under the Influence

Your ability to process information is divided into three stages: stimulus identification (seeing a hazard), response selection (deciding to avoid the hazard), and response execution (veering to avoid the hazard). Driving a car involves a complicated mix of all three. Flying, while exhilarating, is an even more precise, demanding, and unforgiving endeavor. Any factor that impairs your ability to perform the required tasks during the operation of an aircraft is an invitation for disaster. Alcohol, recreational drugs, and even some prescription drugs, are perfect examples of just such a factor.

While this problem has been highlighted in commercial aviation, it is not as well documented in the world of general aviation, where a pilot can step into a plane and fly with little to no interaction with other people. There are no outside deterrents to help screen a person's sobriety, thus data collection is encumbered unless a mishap occurs.

"But I Don't Feel Drunk"

Fitness to fly goes far beyond making sure you have enough gas in the tank or favorable weather. It means thoroughly assessing your capability to

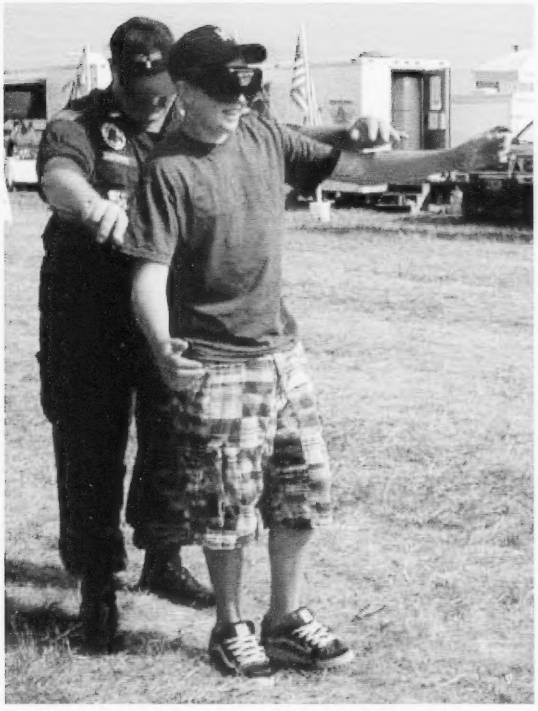


Photo courtesy of Civil Air Patrol

The Civil Air Patrol demonstrates the effects of alcohol through the use of "drunk goggles" during airshows as part of its Drug Demand Reduction program. Pilots are encouraged to test their reflexes and abilities through various games and simulations.

negotiate a safe flight. This includes recognizing the Bloody Mary you had at breakfast, or even the few martinis you had with dinner the night before, could legally and physically impair you from flying, even if you don't "feel" drunk. The real problem is that quite often people just don't realize that they have a problem.

There are three things you need to know to help determine your level of alcohol consumption: how to count a standard drink, how alcohol affects your body, and the effects alcohol has on your behavior.

For a reference, a standard drink is equal to one 12-ounce beer, 1.5 ounces of liquor, or 5 ounces of standard wine. Be warned: Many mixed drinks (e.g., Long Island Iced Tea) give you far more than just one "drink" in your glass.

To factor your BAC, use Figure 1. Keep in mind that the legal limit for intoxication is .08, and that the use of alcohol and drugs by pilots is regulated by 14 CFR section 91.17, which states that no person may operate an aircraft within eight hours of having consumed alcohol, while under the influence of alcohol, or with a BAC of .04 or greater.

As for illicit recreational drugs, there is no agreed-upon limit for which impairment has been reliably demonstrated. Some drugs linger in the body for a period of days or weeks, so just don't do it!

When considering how alcohol affects you, at a .05 BAC, most people begin to feel warm, sedated, and may experience a slight decrease in reaction time and fine-muscle coordination. Between .07 and .09, there is usually a noticeable speech impairment. Balance, motor skills, hearing, and vision are also greatly impaired. At .12, mental faculties and judgment are hampered. Over .14, and there is major loss of mental and physical control. A level of .30 or higher is classified as severe intoxication, and the potential for loss of consciousness is high.

If you would like additional training or someone to talk to your organization/class about the effects of drinking and flying, contact the Civil Air Patrol Drug Demand Reduction team:

ddr@capnhq.gov
877-227-9142 ext. 412

Self-Assessment Time

Don't know if you have a problem? You owe it to yourself and to the flying community to find out. Many websites offer quizzes to try and determine your level of consumption, but one good one is www.alcoholscreening.org . This website lets you anonymously click through straightforward questions and then offers guidance based on your honest answers. Dr. Nicholas Lomangino, Deputy Manager for FAA's Medical Services Division, recommends taking the self-assessment, even if you don't think you have a problem. You just might be surprised with the results and regardless, the site provides good data to consider for the future.

Sabrina Woods is an assistant editor for the FAA Safety Briefing. *She spent 12 years in the active duty Air Force where she served as an aircraft maintenance officer and an aviation mishap investigator.*

ALCOHOL IMPAIRMENT CHARTS (Approximate Blood Alcohol Percentages)

MALES

Drinks	Body Weight in Pounds								Effect on Person
	100	120	140	160	180	200	220	240	
0	.00	.00	.00	.00	.00	.00	.00	.00	Only Safe Driving Limit
1	.04	.03	.03	.02	.02	.02	.02	.02	
2	.08	.06	.05	.05	.04	.04	.03	.03	Impairment Begins
3	.11	.09	.08	.07	.06	.06	.05	.05	
4	.15	.12	.11	.09	.08	.08	.07	.06	Driving Skills Significantly Affected
5	.19	.16	.13	.12	.11	.09	.09	.08	
6	.23	.19	.16	.14	.13	.11	.10	.09	Legally Intoxicated
7	.26	.22	.19	.16	.15	.13	.12	.11	
8	.30	.25	.21	.19	.17	.15	.14	.13	Criminal Penalties in All States
9	.34	.28	.24	.21	.19	.17	.15	.14	
10	.38	.31	.27	.23	.21	.19	.17	.16	

FEMALES

Drinks	Body Weight in Pounds								Effect on Person
	90	100	120	140	160	180	200	220	240
0	.00	.00	.00	.00	.00	.00	.00	.00	.00 Only Safe Driving Limit
1	.05	.05	.04	.03	.03	.03	.02	.02	.02 Impairment Begins
2	.10	.09	.08	.07	.06	.05	.05	.04	.04 Driving Skills Significantly Affected
3	.15	.14	.11	.10	.09	.08	.07	.06	.06
4	.20	.18	.15	.13	.11	.10	.09	.08	.08
5	.25	.23	.19	.16	.14	.13	.11	.10	.09 Legally Intoxicated
6	.30	.27	.23	.19	.17	.15	.14	.12	.11 Criminal Penalties in All States
7	.35	.32	.27	.23	.20	.18	.16	.14	.13
8	.40	.36	.30	.26	.23	.20	.18	.17	.15
9	.45	.41	.34	.29	.26	.23	.20	.19	.17
10	.51	.45	.38	.32	.28	.25	.22	.21	.19

Learn More

FAA Pilot Safety Brochure on alcohol and flying
www.faa.gov/pilots/safety/pilotsafetybrochures/media/alcohol.pdf

Aeromedical Advisory

FREDERICK E. TILTON, M.D.
FAA FEDERAL AIR SURGEON

We're Here to Help

I know that many (maybe most) pilots harbor fears, and possibly serious misperceptions about the operation and mission of the FAA's Office of Aerospace Medicine (OAM). Some of that fear may be due to a lack of understanding of our job, our process, and our philosophy. Our primary responsibility is to protect the safety of the National Airspace System, and our desire is to issue a medical certificate to every airman applicant as long as it is safe to do so. Work with us, and we will most certainly work with you to accomplish our shared goal of getting you safely into the sky.

I'd like to take this opportunity to share a little more information about the what, the why, and the who of how the OAM operates.

What and Why

We are all bound by the Code of Federal Regulations, and the ones specific to medical certification are laid out in 14 CFR part 67. This lists all of the medical standards that an airman must meet for a given class of medical certificate. You might think of part 67 as the rules of the game.

Another helpful resource is the FAA's Guide for Aviation Medical Examiners. For your reference it can be found at http://go.usa.gov/YzrC . You can consider this document as the AME's playbook. It delineates, in much greater detail, how the FAA expects an AME to conduct the aviation medical examination, and offers guidance on applying the medical standards. As you might expect, this document contains quite a bit of technical and medical information, but it also provides plenty of useful information for pilots.

Work with us, and we will most certainly work with you to accomplish our shared goal of getting you safely into the sky.

Who Makes the Decisions?

For most pilots, interaction with the FAA's OAM occurs through an AME; a physician whom the FAA has designated to act on its behalf. I'm happy to say that typically this interaction is a simple and straightforward process that results in on-the-spot issuance of an FAA medical certificate. That's exactly how we want it to work.

However, if an AME finds that you do not meet the medical standards, it will likely result in a delay in getting your certificate — but most importantly, not necessarily in a denial. Several things can happen when an AME determines that you might not meet the medical standards. When an AME is unsure of how to handle a specific case, he or she may simply defer the decision to the FAA, and transmit the application and examination. In this case, you will not receive a medical certificate or a denial until the file is reviewed either by the Regional Medical Office or the Aerospace Medical Certification Division (AMCD). The AME may also call either their Regional Flight Surgeon or the AMCD to discuss the case. Depending on the specific situation, the AME may be able to issue your medical certificate.

A Regional Flight Surgeon (RFS) heads each of the nine Regional Medical Offices and is assisted by a Deputy Regional Flight Surgeon as well as an additional Flight Surgeon in the larger Regions. The RFS has the authority to issue or deny most medical certificates.

The AMCD is located at the Civil Aerospace Medical Institute (CAMI) in Oklahoma City. The Division Manager (Flight Surgeon) at AMCD also has the authority to issue or deny most medical certificates. Some medical conditions can only be reviewed for decision at my level. Medical policy comes from the Medical Specialties Division at Headquarters in Washington, DC, and it is carried out by the Regional Medical Offices and AMCD.

If the RFS or Manager of AMCD denies your medical certificate, you have the option of appealing to me via the Medical Appeals Branch of the Medical Specialties Division in Washington, DC. This division conducts a thorough review before making its recommendation to me. Let me assure you that I take the responsibility for evaluation and consideration very seriously — being a pilot myself,

CAMI photo

Last December marked the 50th anniversary of the FAA's Civil Aerospace Medical Institute (CAMI). CAMI's accomplishments have spanned the entire range of human involvement in aviation systems.

I understand how important it is to leave no stone unturned when evaluating a case. If you receive a denial at my level, you may appeal your case to the National Transportation Safety Board for a hearing in front of an Administrative Law Judge.

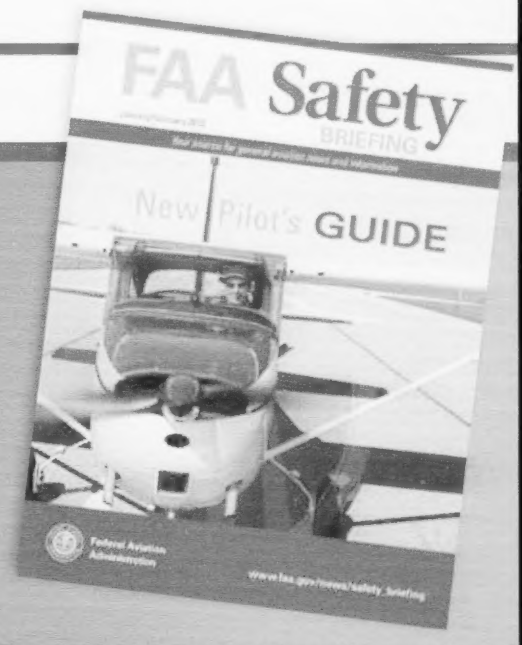
Understand that you play a major part in our review of your case. Please remember that we need your help when we request additional medical information or testing. While I understand that some requests involve cost and inconvenience, keep in mind that we are looking for any pieces of information that will allow us to issue you a medical certificate. One of the greatest frustrations I have is to see airmen grounded simply because we did not receive information that could have made a difference in our decision. Please don't let that happen! Work with us, and we will work with you to achieve our mutual goal of happy, safe, and healthy flying.

Frederick Tilton, M.D., M.P.H., received both an M.S. and an M.D. degree from the University of New Mexico and an M.P.H. from the University of Texas. During a 26-year career with the U.S. Air Force, Dr. Tilton logged more than 4,000 hours as a command pilot and senior flight surgeon flying a variety of aircraft. He currently flies the Cessna Citation 560 XL.

Subscribe Today!

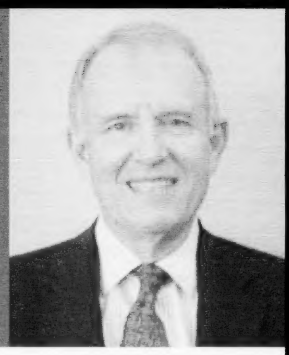
FAA Safety Briefing is available as an annual subscription from the Government Printing Office. There are three ways to sign up today!

- By Internet at: http://bookstore.gpo.gov/actions/GetPublication.do?stocknumber=750-002-00000-5
- By contacting GPO toll free at: 1-866-512-1800
- Sign up for e-mail updates at: www.faa.gov/news/safety_briefing/



DR. COURTNEY SCOTT
MANAGER, AEROSPACE MEDICAL CERTIFICATION DIVISION

Ask Medical Certification



Q: What is required before and at your next physical after having a kidney stone pass? My doctor says I have no more stones and no further signs of any kidney stones.

A: The airman needs to provide a current status report from the physician who treated the kidney stones and a report of a radiographic image that documents there are no residual stones. Repeat episodes of kidney stones should also have an additional evaluation that assesses if there is a treatable cause. All this information should be taken to the AME.

Q: Due to chronic diseases — Crohn's Disease and hypertension — I am required to submit reports from my doctors attesting to my continued ability to fly safely. My medical certificate was due to expire on August 31, so I sent in the reports over a month before the expiration date, but that date has lapsed and I have yet to receive a response due to backlog. Rather than wait for the FAA doctor and being that my AME is familiar with my medical history, why can't she review my reports and issue my medical certificate, pending a review by FAA doctors?

A: The FAA is in agreement with you. We are in the process of changing this policy to exactly what you propose. Look for something to happen on this in early 2013. There are a number of other conditions that will be on this list. We are establishing specific parameters for the diseases, but if those conditions are met, the AME will be able to go ahead and issue your medical certificates.

Q: I had successful prostate removal in December 2007. I was issued a special issuance with a yearly requirement for a letter from "my treating physician regarding my history of prostate cancer. ..." My PSA has been zero and hopefully will be next month when I get my fifth annual checkup. Two years ago my surgeon said that there was no need for me to take up office time if my annual PSA checks remained zero. Eighty percent of men over 80 years of age have cancer cells in their prostates. Of that group, those who are pilots have prostate cancer by definition — but have not been diagnosed — are not required to have special issuance physicals. I, on the other hand, have no prostate cancer. So why must I, and others like me, be required to continue on special issuance physicals?

A: Your point about the frequency of prostate cancer is well made and recognized. Nevertheless, there is still some potential for aeromedical concern with prostate cancer. Our current policy for prostate cancer is that if the condition is early and well taken care of, as your case appears to be, the FAA only requires that the condition be followed for two years. In the near future, we anticipate delegating the requirement for the aeromedical assessment and follow-up of early, uncomplicated prostate cancer to the Aviation Medical Examiner (AME). This will include the initial presentation of the disease and will greatly expedite medical certificates for airmen with prostate cancer.

Q: Will my medical status be affected if I decide to start medicine to aid in treating erectile dysfunction? And are there any specific medicines that are already on the FAAs "no-go" list or are there any side effects I should be aware of that might prohibit me from flying? Right now I have a third-class medical that doesn't come up for renewal until April 2013. Would I have to get a special issuance?

A: There are a number of medications that are currently allowable for erectile dysfunction that do not require special issuance. Some, however, do require a "no fly after use for XX hours." The latter include the popular phosphodiesterase 5 inhibitors: sildenafil, vardenafil, and tadalafil. The no-fly time depends on the half-life of the medications. Tadalafil for daily use is not allowed. Alprostadil and Papaverine for self-injection are allowable. Your AME can help guide you as to the requirements for these medications.

Dr. Courtney Scott is the Manager of the Aerospace Medical Certification Division in Oklahoma City, Okla. He is board certified in aerospace medicine and has extensive practice experience in civilian, and both military and non-military government settings.

BY TOM HOFFMANN

AMEing for Excellence

The Making of an Aviation Medical Examiner

Pop Quiz: I am a private physician designated and authorized to perform flight physical examinations and issue airman medical certificates to qualified applicants. Who am I?

Ok, I know, easy question. But ask yourself this: how much do you really know about your Aviation Medical Examiner (AME)? For example, do you know what it takes to become an AME? How about the type of training they receive? And how does the FAA ensure AMEs are kept in the loop with procedure and regulation changes as well as advances in aerospace medicine? There's a whole lot more than meets the eye when it comes to being an AME. So allow me to offer a behind-the-scenes look that will help you appreciate the service they provide.

The Background

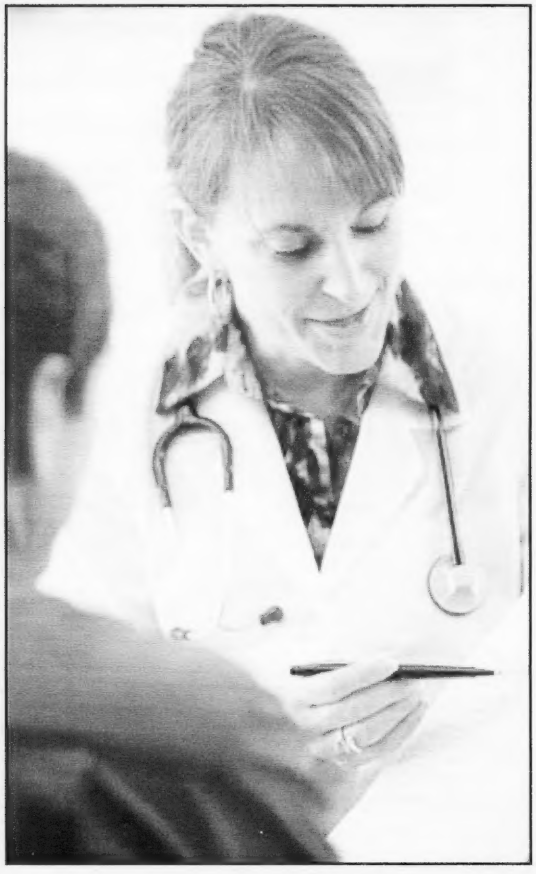
Although military flight surgeons have been around since the WWI era, it wasn't until 1927 that the Aeronautics Branch of the Department of Commerce first designated qualified private physicians to perform airman medical examinations and issue medical certificates. Today, there are approximately 3,400 active AMEs, many of whom are family practitioners with a keen interest in aviation safety.

The aviation industry has a knack for rapidly developing technology, with today's pilots being exposed to higher, faster, and more complex environments. As a result, the role of an AME has evolved, yet it remains a stable element in helping ensure safe skies. Keeping pace requires AMEs to stay attuned to changes from both the medical arena and the aviation industry. Whether it's understanding how a certain new drug may interact with the rigors of IMC flight, or how an airman's history of surgical procedures could impact his or her ability to aviate safely on a long cross-country, there are myriad ways these two worlds can interact, too often with deadly consequences.

The Support Staff

AMEs are not alone, however. Standing staunchly behind them in support is a cadre of FAA employees dedicated to education and safety outreach — the FAA's Aerospace Medical Education Division (AMED) in Oklahoma City, Okla.

"It's a small group, but we do a lot with regards to helping support, educate, and mentor AMEs," says Dr. Brian Pinkston, manager of the division. "Among our responsibilities is to provide quality assurance for AMEs from day one." Pinkston's team accomplishes



that in a number of ways, including overseeing the education of AMEs on aerospace medicine topics, authoring designee management policy, and issuing annual report cards that monitor the quality of their airman medical applications.

To accomplish all these tasks, the AMED group relies greatly on the assistance of the Regional Flight Surgeon (RFS) offices across the country. "We couldn't do it without the work of RFS, who executes the program on a daily basis. The RFS interacts directly with AMEs and provides interaction at a regional level," says Pinkston.

AMED also maintains a library of education materials and articles to support AMEs as well as FAA policy-makers and researchers. In addition, the group produces pilot education materials — you've probably come across one of their many pilot safety brochures at an airshow or seminar. One of AMED's more interesting responsibilities with regard to pilot education involves oversight of an aviation physiology training course (using an altitude chamber) and a one-day post-crash survival training course, both of which are available to the public. (For more information, see www.faa.gov/pilots/training/airman_education/)

The Qualifications

"Becoming an AME involves several steps," says Pinkston. "First, all AME applicants must meet certain criteria for designation, including being a

Searching for the Right AME

BY TOM HOFFMANN

Whether you're moving to a new city, or just started your flight training, there are many instances throughout your aviation career when you may find yourself on the hunt for an AME. That can be a daunting experience, especially if you're concerned about having to re-explain a few complicated medical issues from your history.

A good place to start your search for an AME is the FAA's online AME Locator tool at www.faa.gov/pilots/amelocator. In addition to opening a master AME list (updated weekly), you can also use the site to search by country, county, city, ZIP code, and last name. And soon, a new improvement to the site will provide a geographic layout of nearby AMEs based on a given city and ZIP code.

However, knowing the names and locations of AMEs in your area is only part of the challenge. "The best way to find a good AME is by local word of mouth," says Dr. John Hastings, a senior neurological consultant to the FAA and former president of the Aerospace Medical Association. "I recommend finding a pilot or pilot organization in your area and ask which AMEs go the extra mile for pilots."

Hastings, a 36-year AME, also suggests contacting an AME's office directly. "Ask how long they have been an AME, if

they have experience with special issuance cases, and what type of connection they have to aviation (pilot, flight surgeon, etc.) You'll want to look for AMEs that are happy with their job and who display an interest in the passion pilots have for flying."

The search for a good AME doesn't have to stop after your first appointment either. "Apply the same criteria you set for choosing a family doctor during your exam to reassess your decision," says Hastings. Did the AME and his/her support staff act professional? Did the AME show an interest in you as a person and a pilot? Even a clean and comfortable office environment can make a big difference.

"A personal connection is key," says Hastings. "The relationship you have with your AME has many of the same important ingredients that should exist with your own family doctor."

qualified physician in good standing, and having a record that reflects professional performance.

"There must also be a need for an AME in the location in which they plan to practice," says Pinkston. Physicians who express an interest in becoming an AME are asked to contact their RFS, who will then determine if there is a need for that area. If there is, the AME applicant will be directed to submit an application and provide any required credentials or documents (e.g., diplomas, licenses).

When being considered as an AME, applicants must also agree to comply with all policies and procedures as required by the FAA. This includes being familiar with aerospace medicine principles, exam techniques, medical assessments, and airman certification. AMEs are also expected to maintain an office address approved by the RFS and have the facilities necessary to perform the required medical exams. Required equipment for AMEs includes select diagnostic instruments, vision and audio testing devices, and electrocardiogram machines for those providing first-class medicals. The *Guide for Aviation Medical Examiners* (search www.faa.gov) contains a full description of AME equipment requirements. And, for a more complete list of overall AME qualifications, reference FAA Order 8520.2G.

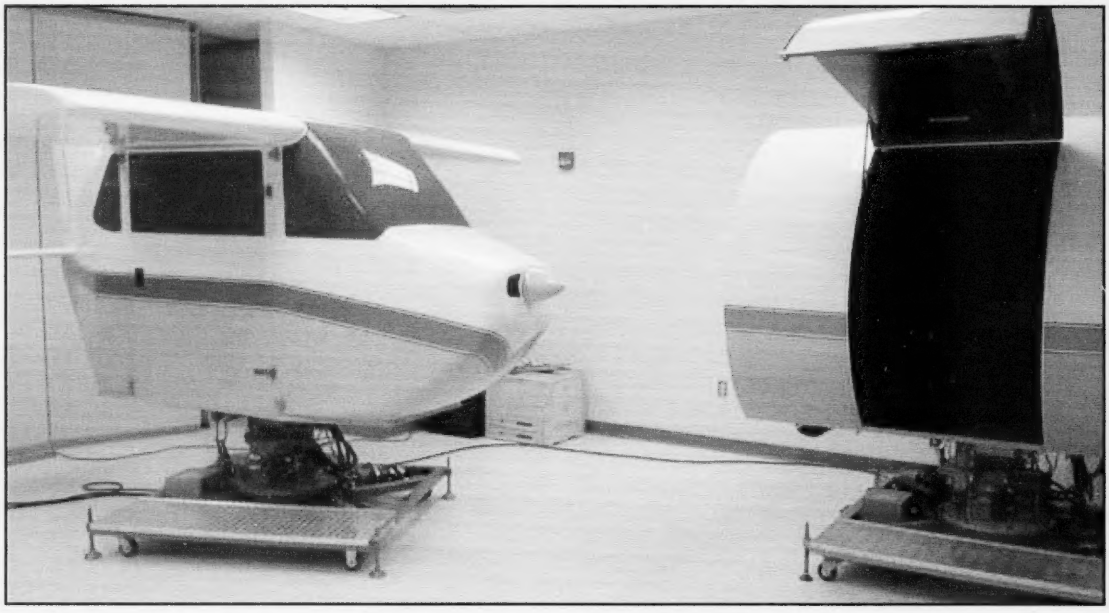
The Training

Once an AME applicant has been accepted, he or she will need to begin training. Initially, it's a three-part process starting with two distance learning courses: Medical Certification Standards and Procedures Training (MCSPT) and the Clinical Aerospace Physiology Review for AMEs (CAPAME). Upon completion of those courses, the AME will attend the third part of the training, a one-week Basic AME Seminar, which is offered three times a year at the FAA's Civil Aerospace Medical Institute (CAMI).

"The Basic Seminar allows AMEs to learn about airman physiology and environmental factors unique to pilots, as well as the specific FAA rules for aeromedical decision-making," says Pinkston. "In addition to medical didactics, the physiology course taught by CAMI exposes AMEs firsthand to the effects of hypoxia, night vision, and spatial disorientation — all subjects not generally taught in traditional medical school programs. And although some AMEs are pilots with experience in these areas, many are learning this for the first time."

To stay active as an AME, refresher training is required every three years. AMEs can choose to attend a live FAA seminar or take the Multimedia Aviation Medical Examiner Refresher Course (MAMERC). However, AMEs are required to attend

Calling All Mechanics
Keep Informed with
FAA's Aviation Maintenance Alerts
Aviation Maintenance Alerts (Advisory Circular 43.16A) provide a communication channel to share information on aviation service experiences. Prepared monthly, they are based on information FAA receives from people who operate and maintain civil aeronautical products.
The Alerts, which provide notice of conditions reported via a Malfunction or Defect Report or a Service Difficulty Report, help improve aeronautical product durability, reliability, and safety.
Recent Alerts cover:
• Cracked isolator mounts on the Air Tractor AT301
• Cracked main gear on the Cessna 402C, 414A, and 421C
• Cracked cylinder head on Continental IO-550-N25 engine
Check out Aviation Maintenance Alerts at:
http://www.faa.gov/aircraft/safety/alerts/aviation_maintenance/



AMEs use simulators during training to experience first-hand the effects of spatial disorientation in flight.

a live seminar at least once every six years. The seminars are offered several times a year at various locations. Training is also highly recommended for any members of an AME's staff that assist with processing of medical certificates.

The Responsibilities

Once officially designated, an AME assumes several important responsibilities with regard to aviation safety. In addition to abiding by the ethical and operational standards set by the FAA and ensuring that medical certificates are issued only to those that meet the required standards, AMEs also take on the role of being aviation safety advocates in their communities and among the airmen they work with. Some are involved with delivering lectures and safety seminars on aeromedical topics, while others offer their assistance in the investigation of general aviation accidents.

Although they are not FAA employees, AMEs are designees, which means they have been granted the authority to act as representatives of the FAA Administrator to help carry out the agency's safety mission. But with such responsibility also comes accountability.

"We take monitoring the performance of AMEs very seriously," says Pinkston. "If we receive complaints or notice an increase of errors or incomplete applications, we will coordinate with the RFS and investigate the issue." Failure to correct issues such as careless or incomplete reporting, disregard for FAA rules, or unprofessional behavior, could result in a suspension or termination of an AME's designation.

However, the FAA prefers to take a more proactive approach to oversight in order to head off any potential problem areas. AMED works regularly with the RFS offices to provide performance reports, share stakeholder feedback, and coordinate site visits to AME offices, especially for those who are newly designated. The national site visit goal is to survey every AME's office at least once every five years, via virtual site visits if necessary.

The Mission

As you can see, the role of an AME is rather complex. The challenges are many and the tolerance for error is slim to none. There's no doubt that the efforts and skills of these men and women, ensuring our fitness to fly on a daily basis, contribute directly to the success and safety of our national airspace system.

Tom Hoffmann is the managing editor of the FAA Safety Briefing. *He is a commercial pilot and holds an A&P certificate*

Learn More

Guide for AMEs
www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/

AME Training Requirements
www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/ametraining/

FAA Order 8520.2G
http://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/media/8520.2G.pdf

Fast-track Your Medical Certificate

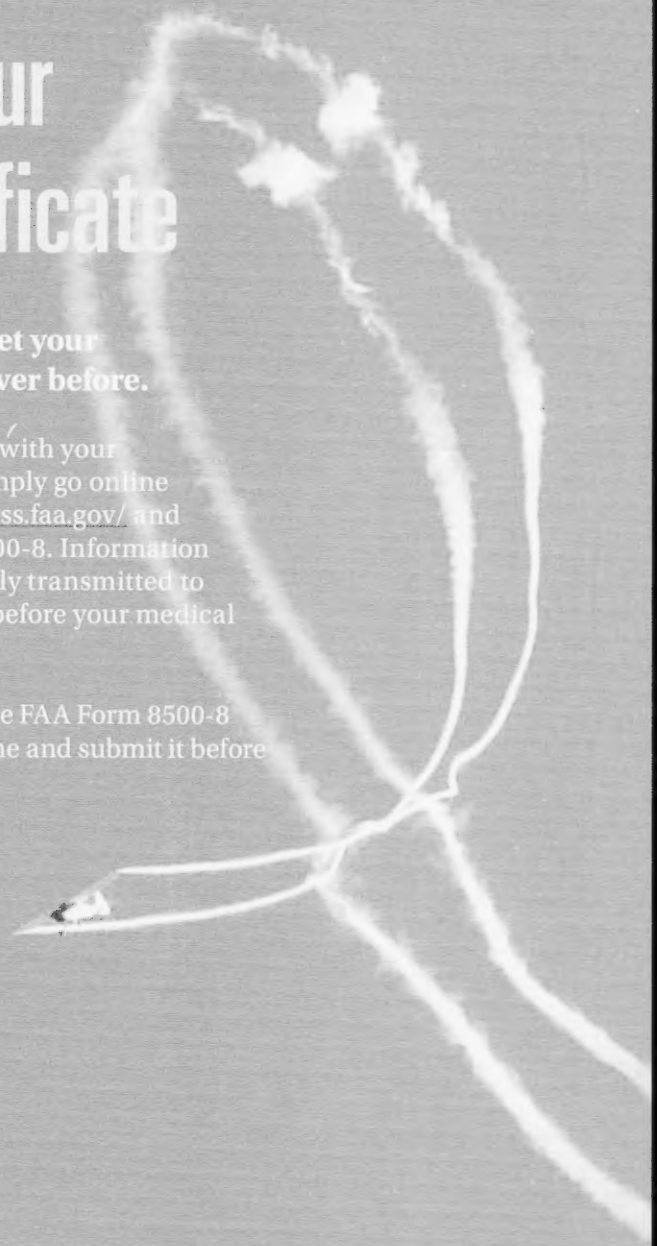
With FAA MedXPress, you can get your medical certificate faster than ever before.

Here's how: Before your appointment with your Aviation Medical Examiner (AME) simply go online to FAA MedXPress at https://medxpress.faa.gov/ and electronically complete FAA Form 8500-8. Information entered into MedXPress is immediately transmitted to the FAA and forwarded to your AME before your medical examination.

With this online form you can complete FAA Form 8500-8 in the privacy and comfort of your home and submit it before scheduling your appointment.

The service is free and can be found at:

https://medxpress.faa.gov/



FEDERAL AVIATION ADMINISTRATION

Flying for an airline may require either a second or first class medical certificate.

The Right Stuff

What Kind of Medical Must I Hold?

BY JAMES WILLIAMS

You have probably seen or heard about the kind of "right stuff" physical perfection required of early astronauts and, for that matter, the earliest aviators obliged to obtain a medical certificate. In both cases, the standards were such that many of today's active airmen might have never passed the exam.

Fortunately, things are different now. The standards recognize that few of us are perfect physical specimens, and they also recognize that the level of certification required for personal recreational flying is different from that needed to command a large passenger airliner. Flexibility is good, but the range of available options can sometimes raise questions. A frequent query in the *FAA Safety Briefing* mailbox is some version of: "I have X condition and so I can only qualify for a third-class medical. Can I still get a flight instructor certificate?" A related area of confusion arises from the medical differences between *holding* a given pilot or instructor certificate and *exercising the privileges* of that certificate. Let's take a look.

First Things First

To take a practical test for your airline transport pilot (ATP) certificate, you only need a third-class medical. But if you want to exercise the privileges of the ATP certificate, you need to hold a first-class medical certificate. The same concept applies to acquiring a commercial certificate. You don't need more than a third-class medical to take the practical test, but of course you will need a second-class medical if you want to exercise commercial certificate privileges. There are some nuances involved in exercising the privileges of a flight instructor certificate, but we'll come back to that later on.

So what level of medical certificate should you seek? Some experts and organizations advise pilots to seek only the level of medical certification required for the level of privileges they intend to exercise. Even if you have an ATP certificate that you have acquired for personal development, or maybe for insurance reasons, you may not need to hold more than a third-class medical certificate for the kind of flying you actually do (e.g., private pilot privileges).

If you intend to fly professionally, though, it's a good idea to apply at least once for a first- or second-class medical. It makes sense to know up front if you can qualify for that level of medical certificate. Better to discover a problem at the beginning rather than invest (literally) the time and resources needed for commercial or ATP certificates and then learn that you will never be medically qualified to exercise those privileges.

Who's on Third?

You might think of the third-class medical as the foundational medical certification level and, for most purposes, it is. Unless you are flying as a sport pilot (more on that later), you need at least a third-class medical.

Being a flight instructor may not require a medical at all, but it might depending on the situation and the student.

Now let's get back to the question raised at the beginning with respect to exercising the privileges of a flight instructor certificate. We've already established that, assuming you pass the practical test, all you need to earn the flight instructor certificate is a third-class medical. But what if you have a medical condition that limits you to that level of medical certificate? Can you still exercise the privileges of a flight instructor certificate, which is valid only with the individual's commercial pilot certificate?

The short answer is yes. The longer answer has nuances. Let's look at both.

A pilot may exercise the privileges of a flight instructor certificate, act as pilot in command, and/or serve as required pilot flight crew member with no more than a third-class medical certificate. And if the flight instructor is not acting as pilot in command, 14 CFR section 61.23(b)(5) states that he or she does not need a medical at any level. Why the exception, since the flight instructor is presumably being paid? The FAA determined that flight instructors may be paid for their work without at least a second-class medical because they are being paid for their instruction, and not specifically for piloting the aircraft.

What medical certificate is required to take a practical test?

A word to the wise, however: Some operators or insurance companies may still require a second-class medical even if the FAA does not. In addition, a flight instructor with anything less than a second-class medical must be mindful of potential regulatory minefields.

"It's easy to find yourself on the wrong side of that issue," Aviation Safety Inspector and Airman Training and Certification Branch Manager Jeffrey Smith told us. "Let's say you're working for a flight school and they pay you to operate an aircraft for something other than flight instruction. Can you do that?" Smith explains that the answer may be no. "Depending on the flight, you'd be conducting a commercial operation that would require a second-class medical."

The medical standards recognize that few of us are perfect physical specimens, and they also recognize that the level of certification required for personal recreational flying is different from that needed to command a large passenger airliner.

Smith continued, "These pop-up requests could create a problem for a CFI with only a third-class medical. If that's your situation, it's a good idea to have a talk with your local FSDO to be sure you understand the limitations on your operations with a third-class medical. Your employer might not realize those limitations when he or she asks you to do something, so it's important for you to be knowledgeable."

No Medical, No Problem

So are there things you can do without a medical certificate? Absolutely. As I have just explained, a flight instructor who is not acting as pilot in command can instruct without holding any kind of medical certificate. For instance, you could conduct proficiency training or a flight review for a certificated pilot who is rated in the airplane and current (i.e., current flight review).

There are other activities that do not require a medical. The regulations (14 CFR section 61.23(b)) list several operations not requiring a medical certificate. These include operating a glider or balloon.

As you probably know, a person exercising the privileges of a sport pilot certificate does not require a conventional medical certificate. This function is addressed in 14 CFR section 61.23(c), "operations requiring either a medical certificate or U.S. driver's license." This provision outlines the requirements and restrictions a sport pilot must observe when flying on the so-called driver's license medical. For instance, a pilot using his or her driver's license must comply with any restrictions placed on that license. And, if the pilot has ever applied for a medical certificate, that pilot must have been found eligible for the issuance of at least a third-class medical certificate at the time of the most recent application. The driver's license medical provision is similarly unavailable if the pilot's medical certificate has been suspended or revoked, or if the FAA has withdrawn the most recent special issuance. And, as with any kind of medical certificate, the pilot cannot know or have reason to know of any medical condition that would render him or her unable to safely operate a light sport aircraft.

As you can see just from this short summary, today's pilots have a great many more medical certification options than our flying forbears enjoyed. Use them; enjoy them; and fly safely!

James Williams is FAA Safety Briefing*'s associate editor and photo editor. He is also a pilot and ground instructor.*

Photo courtesy of Able Flight

BY PAUL CIANCIOLO

Flying with Disabilities

You don't have to be able to walk to take wing and fly! As long as it is safe to do so, the FAA encourages everyone to experience the thrill and excitement of learning to fly.

Through sport pilot certification, people who use wheelchairs due to spinal cord injury or loss of limbs have the opportunity to earn their wings. Medically speaking, all that's needed is a valid and current state driver's license. Pilots must follow any restrictions or limitations set for driving while using the driver's license as a basis for flying. As you know, the driver's license medical is an option only if you have not had an FAA medical exam that resulted in denial or deferral. In this case, you need to "clear" the issue first by getting at least a third class medical; you can later allow it to expire and use the driver's license medical option.

Photo courtesy of Flight Design USA

Disabled pilots who seek a private pilot (or higher) certificate may also have the option to seek a standard medical certificate issued with a Statement of Demonstrated Ability (SODA), which can include aircraft and other types of restrictions.

Pictured to the left is a hand control system with a stick for the rudder and integration of an additional brake handle, which can be installed in many light-sport aircraft. Specially modified aircraft allow people with disabilities to safely fly.

Pictured above is pilot Brad Jones, who earned his sport license in 2007 through Able Flight. Able Flight, online at ableflight.org, is a national non-profit organization that grants scholarships for flight and aviation career training to people with physical disabilities.

Paul Cianciolo is an assistant editor and the social media lead for FAA Safety Briefing. He is a U.S. Air Force veteran, and a rated aircrew member and search and rescue team leader with the Civil Air Patrol.

PAUL CIANCIOLO

Navigating the Medical Flight Path

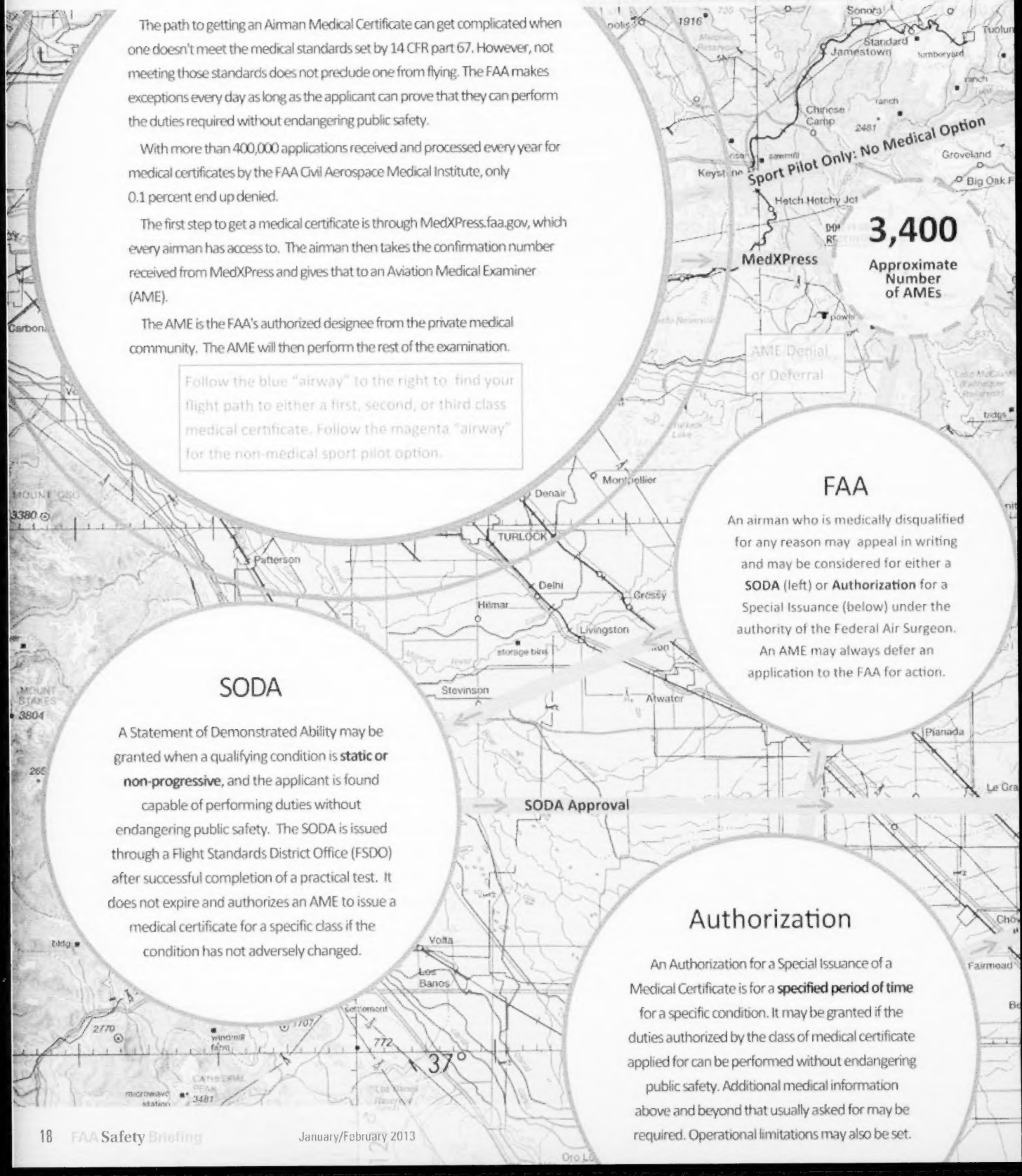
The path to getting an Airman Medical Certificate can get complicated when one doesn't meet the medical standards set by 14 CFR part 67. However, not meeting those standards does not preclude one from flying. The FAA makes exceptions every day as long as the applicant can prove that they can perform the duties required without endangering public safety.

With more than 400,000 applications received and processed every year for medical certificates by the FAA Civil Aerospace Medical Institute, only 0.1 percent end up denied.

The first step to get a medical certificate is through MedXPress.faa.gov, which every airman has access to. The airman then takes the confirmation number received from MedXPress and gives that to an Aviation Medical Examiner (AME).

The AME is the FAA's authorized designee from the private medical community. The AME will then perform the rest of the examination.

Follow the blue "airway" to the right to find your flight path to either a first, second, or third class medical certificate. Follow the magenta "airway" for the non-medical sport pilot option.



FAA

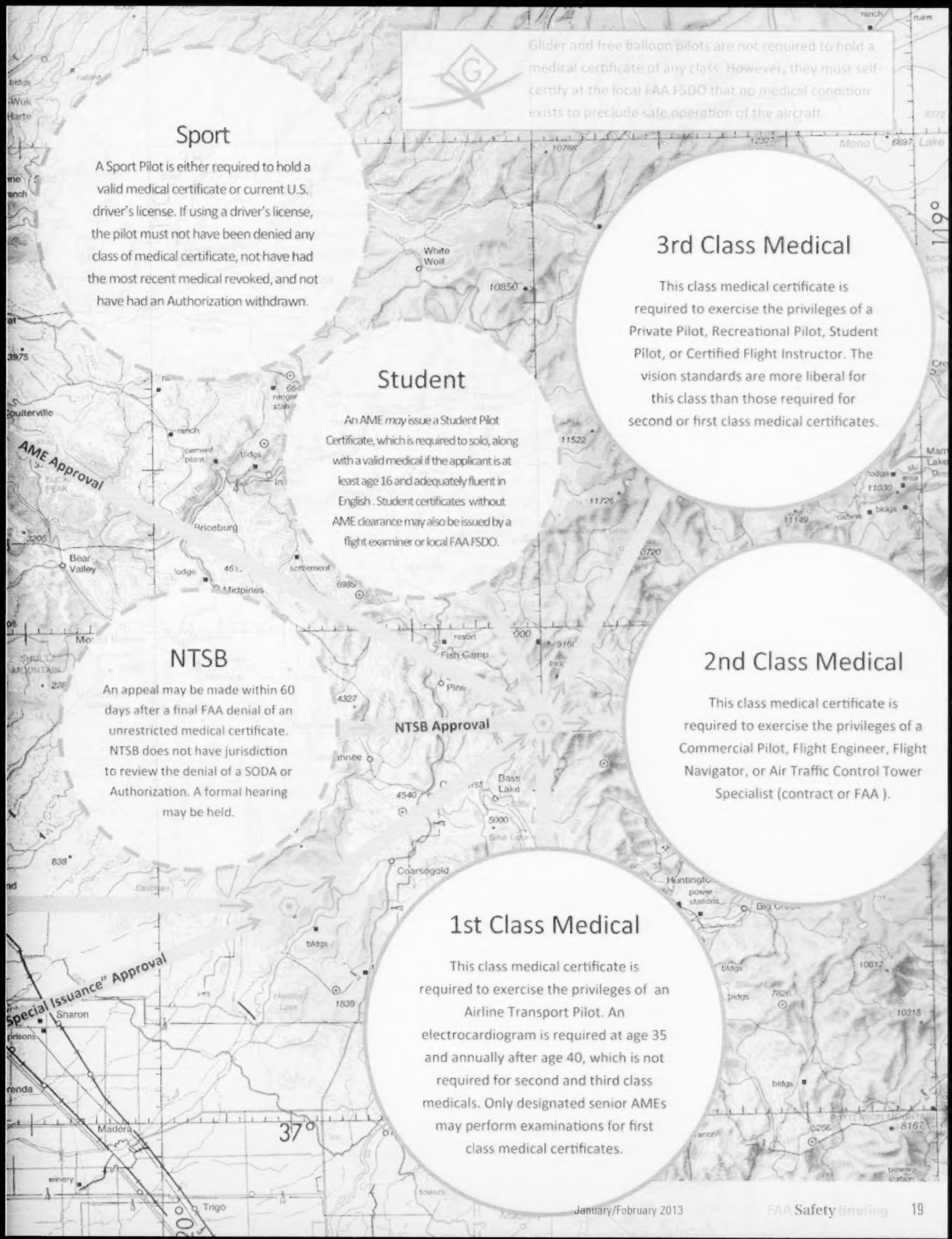
An airman who is medically disqualified for any reason may appeal in writing and may be considered for either a **SODA** (left) or **Authorization** for a Special Issuance (below) under the authority of the Federal Air Surgeon. An AME may always defer an application to the FAA for action.

SODA

A Statement of Demonstrated Ability may be granted when a qualifying condition is **static or non-progressive**, and the applicant is found capable of performing duties without endangering public safety. The SODA is issued through a Flight Standards District Office (FSDO) after successful completion of a practical test. It does not expire and authorizes an AME to issue a medical certificate for a specific class if the condition has not adversely changed.

Authorization

An Authorization for a Special Issuance of a Medical Certificate is for a **specified period of time** for a specific condition. It may be granted if the duties authorized by the class of medical certificate applied for can be performed without endangering public safety. Additional medical information above and beyond that usually asked for may be required. Operational limitations may also be set.


Glider and free balloon pilots are not required to hold a medical certificate of any class. However, they must self-certify at the local FAA FSDO that no medical condition exists to preclude safe operation of the aircraft.
Sport
A Sport Pilot is either required to hold a valid medical certificate or current U.S. driver's license. If using a driver's license, the pilot must not have been denied any class of medical certificate, not have had the most recent medical revoked, and not have had an Authorization withdrawn.
3rd Class Medical
This class medical certificate is required to exercise the privileges of a Private Pilot, Recreational Pilot, Student Pilot, or Certified Flight Instructor. The vision standards are more liberal for this class than those required for second or first class medical certificates.
Student
An AME may issue a Student Pilot Certificate, which is required to solo, along with a valid medical if the applicant is at least age 16 and adequately fluent in English. Student certificates without AME clearance may also be issued by a flight examiner or local FAA FSDO.
AME Approval
NTSB
An appeal may be made within 60 days after a final FAA denial of an unrestricted medical certificate. NTSB does not have jurisdiction to review the denial of a SODA or Authorization. A formal hearing may be held.
NTSB Approval
2nd Class Medical
This class medical certificate is required to exercise the privileges of a Commercial Pilot, Flight Engineer, Flight Navigator, or Air Traffic Control Tower Specialist (contract or FAA).
1st Class Medical
This class medical certificate is required to exercise the privileges of an Airline Transport Pilot. An electrocardiogram is required at age 35 and annually after age 40, which is not required for second and third class medicals. Only designated senior AMEs may perform examinations for first class medical certificates.
"Special Issuance" Approval

BY TOM HOFFMANN

Take the XPress Lane

Learn How to Fast-Track Your Airman Medical Certificate

Who doesn't love a shortcut? These days, electronic toll systems let you breeze past miles of traffic. Smartphone-purchased movie tickets enable a beeline to the popcorn line. Even Disney World has perfected the art of bypassing dreadfully long queues with their FASTPASS® system. Evolving technology has certainly helped in facilitating these time, and money (and sanity) savers which are finding their way into more and more segments of business and society. Realizing the potential for improved cost-savings, convenience, and accuracy, the FAA is also an avid proponent of leveraging technology to improve efficiency in many of its tasks.

A good example is the FAA's MedXPress system for handling airman medical certification applications. Although hardly new, the system recently became a required means of obtaining a pilot medical certificate. As of October 1, 2012, the FAA said good-bye to the paper application and has embraced the online system as the sole means of obtaining an airman medical. However, with an average of less than 40 percent of airman medical applications being submitted via MedXpress the year prior to the new requirement, there are still quite a few pilots who will need to make the transition in the near future.

The good news is MedXPress is easy to use. And you don't have to take my word for how simple it is. Just ask anyone who's used the system. In fact, before I began writing this article, I polled a few of my pilot friends to see how they felt about MedXPress. Those who had used it gave it an overwhelming thumbs up. Others — as I suspect some of you who are reading this now — were unfamiliar, but eager to learn, especially when it means less time in the doctor's office!

First Step – Set Up an Account

For those brand new to MedXPress, your first step is to set up an account. From the home page of MedXPress (https://medxpress.faa.gov/), find the *Request Account* link in the upper left corner. Click the link, and then enter your name, email address, and three security questions. You'll also be asked to acknowledge the Terms of Service Agreement and Pilot's Bill of Rights Notification before hitting the submit button (as well as any other time you log in, for that matter). Ideally, it should only take a few minutes for you to receive a confirmation message to the email address you supplied. If not, give it a couple hours before making an inquiry.

Write down (or right-click and copy) the temporary password you receive from your confirmation email message and click the link that will enable you to log in and complete your registration. After entering your temporary password, you will be asked to create a new password before continuing. Be sure you read and consider all the number, letter, and special character parameters for a secure password when doing so.

8500.8

That's how many questions are on the new form. Just kidding; it's actually the official form number for a medical certificate. Once you're logged in and ready to get started, look for the link to *Form 8500.8* in the top left corner. The link will open an electronic version of the form with a combination of checkboxes, radio buttons, drop-down menus,

and free-fill text boxes in the same order as the questions from the old paper form. Once you get past all the standard background and demographic bits, you'll be asked for specifics on your medical history, beginning with what types of medication you currently use.

According to Dr. Judith Frazier, a medical officer with FAA Office of Aerospace Medicine's Certification Division, this is one area that tends to get some applicants hung up. "Be sure to specifically list the dosage and frequency of all medications you are taking," says Frazier. "If the amount or frequency options available on the form do not match your personal usage, you'll need to provide an explanation." In cases like this, you can write in the explanation with the *Add Comment* button at the end of Question 18.

Another consideration when entering a medication is to make sure you use its specific name, and not just the category it pertains to, (e.g., beta-blockers or blood thinners). If you're unsure of the spelling, MedXPress can help. It will verify the name of your medication (generic or name-brand) with a built-in dictionary. Even if it is not an accepted drug, the system should find it. And if for some reason your medication doesn't show up, click the *Medication Not Found* box. Your AME can always review the form with you during your appointment and make any needed adjustments before submitting.

Is This Better? How About This?

Frazier also advises pilots to pay particular attention to question 17b regarding near-vision contact lenses. "The intent of this question is really to identify someone who is monocular and who may be using one far- and one near-sighted contact

A screen shot from FAA MedXPress, which replaced the paper form 8500.8 in October 2012.

lens." The use of regular contact lenses is allowed. Even bifocal contacts are allowed after an adjustment period. If this is how you wear contacts, check *no* to box 17b.

However, if you choose to wear a contact in one eye that give you near vision and a contact in the other eye that gives you far vision, you must check *yes* to box 17b. This is considered monocular vision and is not allowed; Monocular vision can cause problems with depth perception which is essential when flying and landing a plane. If you have had eye surgery such as LASIK, and you have permanent monocular vision, you may need to do a Medical Flight Test (MFT) to show you can compensate. The other alternative is to wear glasses after eye surgery to correct your vision. Reference the AME Guide for more specifics on the use of contact lenses.

Know Your History

Next up on the form is question 18, where users will need to provide information on their medical history. You must select either *yes* or *no* for each of the items lettered *a* through *y*. These cover everything from asthma to alcohol abuse. Any yes answers under the medical history will require a comment. To do so, just click the *Add Comment* button under the question after you've completed answering every part. The system will automatically provide individual comment boxes for each item you answered with a yes. If it is something you reported during a prior medical and there has been no change since, you can click the *PRNC* checkbox to indicate the condition or ailment was "previously reported, no change." Otherwise, use the provided space to date and describe the condition to the best of your ability.

If there is a condition, disability, or surgery you've had that is not listed in Question 18, use option *x* to report it. Also remember that this question is asking if there are illnesses or conditions you may have now or had in the past. Once you've reported something, you'll always need to include it on your medical application. This is an important point that can be easily overlooked, but can have serious consequences later on.

Question 19 of the medical application appears the same way as the old form, but has a much easier way to input any of your health professional visits from the last three years. Use the text boxes to fill in the data regarding a visit, and then click the *add* button, which will populate the information into organized rows below the question. If you make a mistake or need to make a change, use the *edit* or *delete* options that correspond with each visit. It may be helpful to gather the dates and reasons for each visit ahead of time. Routine eye or dental exams need not be reported.

Finally, Question 20 of the form is simply a consent authorization for the National Driver Register and certification of your declarations on the form. You must select *yes* to continue and submit the form.

Validating ...

You're almost there. All that's left is validating your form, which is one of the features that really help this electronic form shine. "With the old hard copy, both airmen and AMEs could easily miss things on their applications," says Frazier. "That often meant we had to issue the dreaded letter requesting more information. Spelling mistakes or illegible handwriting also were frequent culprits of delaying an airmen medical certificate, but they have now been all but eliminated with the MedXPress system."

By hitting the *Show Validation Errors* button at the bottom of the form, the system will save all your changes and check through your application for any mistakes. Anything the system discovers will be listed along with a corresponding section number. Typical mistakes are blank fields or missing explanations. Once you have corrected the errors, you're ready to send. Just remember that you can't change anything on the form after submitting, so check that everything is correct first.

If your form has been successfully submitted, you'll see a screen with a unique confirmation number. "Write down the number, because you'll need it when it comes time for your medical," says Jana Weems, a program analyst with FAA's Aerospace Medical Certification Division. The confirmation number is what verifies your identity and completes the electronic signature process at your exam. Weems also suggests that airmen click on the *Exam Summary* button, which takes the data from the online form and populates it into a PDF version that resembles the old paper Form 8500.8. "You can save this on your computer for your personal records as well as print a copy to bring to your doctor, especially since it also contains your confirmation number," says Weems.

Remember to ask your AME for a copy of the finished exam. This will have all of the information you put in as well as the comments from the AME to help you with your next exam.

Help and Support

The MedXPress website has everything you need for help in case you get stuck. From the login page you can access the MedXPress user guide, a Q&A on system basics, and a list of contacts for technical support and login issues. If you have problems with how to answer a particular question on the form, try clicking the small grey question mark in front of every section. This will help give you some direction on what specific information the FAA is looking for. If you're still unsure about a particular question, consult your AME at the time of your exam. He or she will be able to make corrections to the form before it is submitted.

During a recent MedXPress information seminar, Dr. Warren Silberman, a Pilot Protection Services Consultant with AOPA, stressed a number of other important considerations that need to be made when using MedXPress. Among them was to remember that once your information is submitted, it expires and is deleted after 60 days. Silberman suggests pilots schedule their medical exams within about 30 days of submitting the application.

Another benefit of MedXPress, according to Silberman, is that "there is no one out there looking at these forms, even after you hit the submit button. In the old days, the minute you start writing on the form, you have 'sealed the deal' and it belongs to the FAA. With MedXPress, until the AME enters your confirmation number and brings the exam into the AME system, it's not yet an official application and you can still back out."

A Win-Win

In review, MedXPress has already proven to be a system that is faster, more accurate, and easier for both you and your AME. So, when it's time for your next medical, you can replace any hesitation with exultation as you take a ride in the XPress lane!

Tom Hoffmann is the managing editor of the FAA Safety Briefing. *He is a commercial pilot and holds an A&P certificate.*

Timeout!

The MedXPress system is designed to automatically time out after 20 minutes of inactivity, so make sure you're saving your work as you go. If you're on the Form 8500-8 screen, you'll get a warning after 15 minutes of inactivity. If no actions are performed within five minutes of the warning, the session will time out and any unsaved information will be lost.

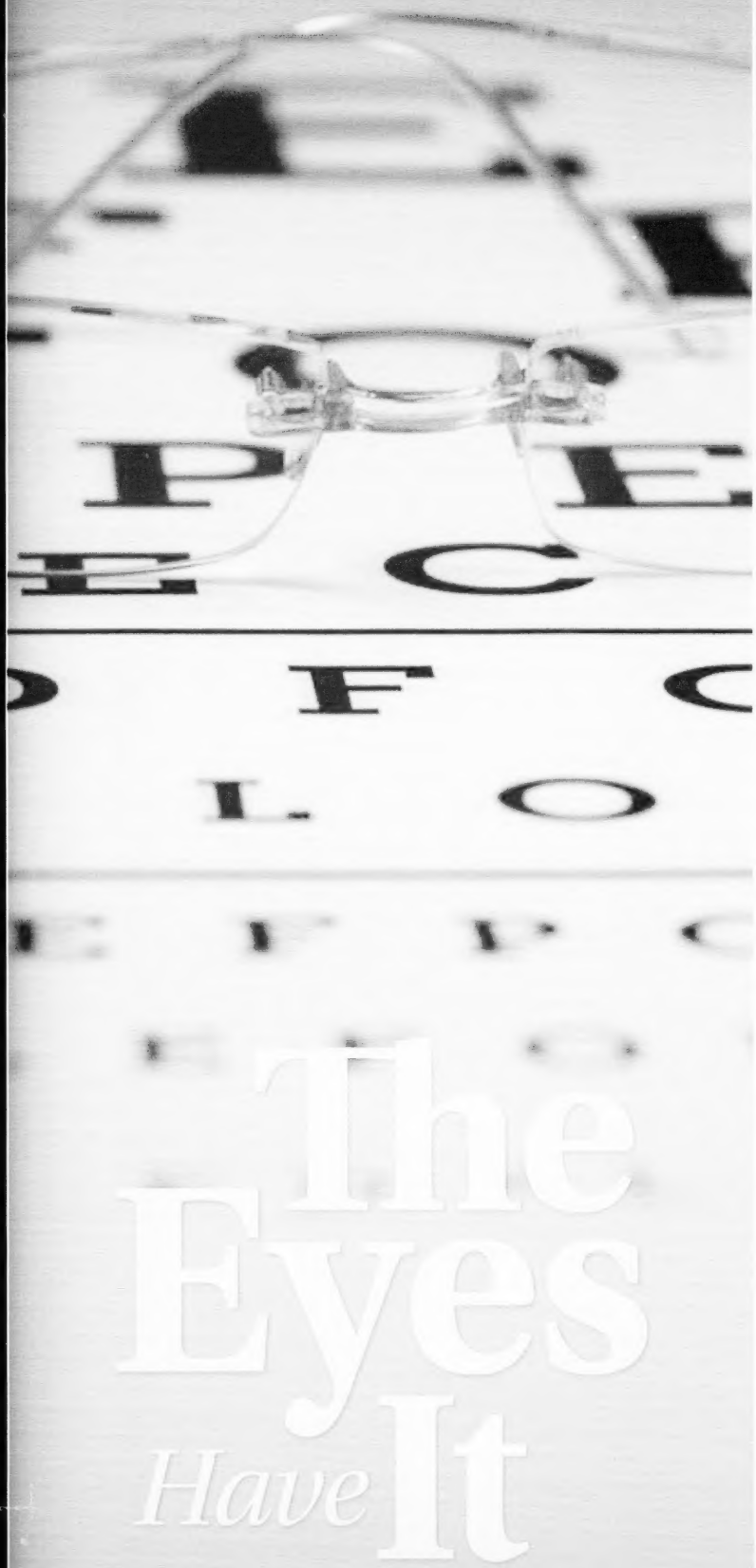
Learn More

MedXPress Video
www.faa.gov/tv/?mediaId=554

MedXPress User's Guide
https://medxpress.faa.gov/medxpress/Guides/MedXPressUsersGuide.pdf

AME Guide
www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/app_process/general/

BY SUSAN PARSON



The Eyes Have It

When I woke up the morning after undergoing laser eye surgery, I was simply astonished by the transformation. Accustomed to the blurry view that had greeted me every morning since my early teens, the sharply-focused clarity was a most welcome surprise. Protective goggles prevented the mistake of rubbing my eyes in disbelief, but I blinked several times to be sure the new view was not some trick of my early-morning imagination.

Hindsight being 20/20, it's easy now to wonder why I waited so long. Plenty of my non-flying friends have asked that very question, but my pilot pals all understand the hesitation. As we all know, the FAA can (and does) certificate pilots with a wide range of physical limitations. Sight, however, is one of the few "no go" items for FAA medical certification. So I thought long and hard about a procedure that — as the eye doctor put it — is "very safe, but not risk free." And I did a lot of research, not only about the procedure itself, but also about the FAA's approval and reporting requirements.

Reflections on Refraction

A common cause of visual deficit is refractive error, which prevents light rays from being brought to a single focus on the retina. The three principal types of refractive conditions are myopia, hyperopia, and astigmatism.

- *Myopia* (nearsightedness) is a condition in which light rays are focused in front of the retina, which makes distant objects appear fuzzy. Myopia affects about 30 percent of Americans.
- *Hyperopia* (farsightedness) is a condition in which light rays are focused behind the retina, making near objects look fuzzy. An estimated 40 percent of Americans are hyperopic.
- *Astigmatism* is caused from an irregular curvature of the cornea, which prevents light from being focused to a single image on the retina. Astigmatism can cause blurred vision at any distance, and it can occur in addition to myopic or hyperopic conditions. Approximately 60 percent of the population has some degree of astigmatism.

Another cause of blurred near vision — one that I have reluctantly come to know in the past decade — is *presbyopia*. Presbyopia is a progressive loss of accommodation, which is a fancy way of saying that age-related physiological changes in the eye's crystalline lens and associated muscle reduce its ability to focus at near distance.

Optical Options

Until I summoned the courage to try laser eye surgery, I spent several decades using a combination of contacts and progressive lens glasses to correct for my particular blend of myopia, astigmatism, and, more recently, presbyopia. Increasingly annoyed by the hassle and discomfort of this approach and buoyed by the unbridled "you'll *love* it" enthusiasm of several friends and colleagues, I decided it was time to look into (ahem) surgical alternatives.

One of the first things I learned is that there are a number of options for refractive surgical correction of vision. Some of the more common procedures are:

LASIK: For a number of reasons, including post-operative comfort, LASIK (laser in situ keratomileusis) has become the preferred choice for refractive surgery by patients and many eye care practitioners. To perform LASIK, the eye doctor uses two Food and Drug Administration (FDA) approved devices: the excimer laser to reshape the cornea and either the femtosecond laser or microkeratome to make the flap. A thin flap is cut from the outside layers of the superficial cornea, leaving it connected by a small hinge of tissue. The excimer laser reshapes the underlying corneal stroma (according to the optical needs and goals), and the corneal flap is returned to its original position.

Originally, LASIK involved creating the corneal flap with a mechanical microkeratome manipulated by the surgeon's hand. The femtosecond laser keratome received FDA approval in December 1999 as the first blade-free technology in the United States for creating the corneal flap. The laser keratome beam passes into the cornea at a predetermined depth, producing a precise cut that may be more accurate than the microkeratome. Corneal flaps made with the laser keratome appear to adhere more tightly to the corneal bed at the end of the procedure, and may reduce problems with long-term flap displacement.

PRK: In October 1995, the FDA approved the use of the excimer laser to perform a refractive procedure called photorefractive keratectomy (PRK) to correct myopia, hyperopia, and astigmatism. As with LASIK, the laser photoablates (vaporizes) the corneal tissue to a predetermined depth and diameter by using a series of laser pulses. Some eye care providers still prefer surface ablation because the procedure is fairly close to LASIK, but without the risks of creating a flap. Healing does take longer however, since PRK creates a total corneal ablation.

ICL (Implantable Collamer Lenses): ICL is used for correction of refractive error primarily for individuals who are not good candidates for laser procedures (e.g., thin corneas, dry eye, or very high refractive error). ICL involves implanting an intraocular lens over the natural lens of the eye. Dr. Harriet Lester, FAA Regional Flight Surgeon for the Eastern Region, colorfully describes this procedure as the "double-patty hamburger" approach.

Monovision: As a convenience, some eye care providers recommend correcting one eye for near vision and the other for distance. This option requires the individual to develop visual cues to reestablish depth perception.

Perfection Isn't Possible (Yet)

Refractive eye surgery has come a long way, but it is still very important to recognize that these procedures involve both risks and tradeoffs. As Lester notes, "Today's technology and techniques for refractive eye surgery are very sophisticated and allow for more customization to the optics of an individual eye as well as fewer errors. Still, you have to accept that any surgical procedure involves risks." These can include not just immediate post-operative effects (e.g., irritation, light sensitivity), but also longer term effects (e.g., glare, "halos" or "starbursts") that many people learn to ignore. There may also be some loss of contrast sensitivity.

Other possible risks include worsening of dry eye and ectasia, which is a progressive steepening or bulging of the cornea. As Lester explains, "LASIK can lead to ectasia in some individuals who are predisposed due to thin or abnormal corneas. That's why pre-operative screening and counseling is so important."

Lester also cautions middle-aged patients to be mindful that "refractive surgery runs into the timeline for developing cataracts. Procedures that modify the cornea may need to be revised after eventual cataract surgery — so keep that in mind in your decision-making process."

As for tradeoffs, Lester observes that surgical correction of myopia changes the focal point from near to distant, which affects near vision clarity. I can attest to that. Though I knew to expect the switch, it was still strange to find that reading glasses were the price of correcting my formerly fuzzy distance vision. It wasn't a big deal to me since I am at an age where readers rapidly become a requirement anyway. Still, it requires an adjustment.

To that end, Lester advises anyone considering refractive eye surgery to think of it in much the same way you might approach a marital commitment: "You have to make compromises, so make sure you can be happy with the ones you have to make. Remember that when you opt for refractive eye surgery, you are making a permanent change in your vision. Do as much research as you can, and don't be afraid to ask lots of questions when you are discussing options with your eye care provider. You

also want to find a top-notch eye surgeon who is willing to say 'no' if you are not a good candidate for these procedures."

Fit for Flight

Like any other aviator, I was eager to know how these procedures would impact FAA medical certification. Here's the bottom line: The FAA allows most FDA-approved refractive procedures, including LASIK, PRK, and ICL for all classes of certification. The FAA accepts monovision after a six-month stabilization period and a successful medical flight test.

Now for the details.

The FAA requires that civil airmen with refractive surgical procedures (e.g., PRK, LASIK) discontinue flying until the eye care specialist has determined adequate healing, with stable vision and no significant adverse effects or complications. For most FAA-allowed refractive procedures, you may resume exercising privileges on your current medical certificate under 14 CFR section 61.53 as soon as your eye care provider releases you to resume normal activities, and when your visual acuity meets the standard for the class of medical you hold.

The FAA allows most FDA-approved refractive procedures, including LASIK, PRK, and ICL for all classes of certification.

The FAA does require your eye care provider to complete a report of eye evaluation (FAA Form 8500-7), which you need to present to your aviation medical examiner (AME) at the time of your next scheduled FAA medical examination. This report must verify complete healing, stabilization of visual acuity, no complications, and lack of significant residual effects that may accompany these types of surgical procedures (e.g., night glare, vision haziness, or eye discomfort). Sufficient healing typically occurs by six weeks, but up to a year or longer may be necessary in some cases. At the time of your next scheduled medical application, your AME may issue the appropriate medical certificate if you are found to be otherwise qualified. You may also submit this report directly to the FAA's Office of Aerospace Medicine. In addition to including specific data on your condition, it should also state that:

> *(T)he airman meets the visual acuity standards and the report of eye evaluation indicates healing is complete, visual acuity remains stable, and the applicant does not suffer sequela, such as glare intolerance, halos, rings, impaired night vision, or any other complications.*

There are a few more steps to take if you opt for monovision, since this procedure results in a monocular vision condition for purposes of FAA medical regulations. In other words, you do not meet the 14 CFR section 67.103, 67.203, and 67.303 requirements for near and distant vision with each eye separately. To regain medical certification after a surgical procedure, the FAA requires a six-month adaptation period. If you want to fly during this six-month interval, you must wear eyeglasses or contact lenses that correct you to meet the vision standard in each eye. Your medical certificate will state this limitation. (*Note: The FAA does not permit use of monovision contact lenses (wearing one lens to correct for distance and one to correct for near vision).*

In order to have this limitation removed at the end of the minimum six-month adaptation period, you need to ask the FAA Aerospace Medical Certification Division to authorize a medical flight test with your local flight standards district office (FSDO). Successful completion of the medical flight test will result in the issuance of a Statement of Demonstrated Ability (SODA) that removes the corrective lens limitation from your certificate.

New Perspectives

There's no question that I am now in the "I love laser eye correction" group. But I'd also be the first to stress that refractive eye surgery is not a decision that any pilot — especially a professional or aspiring professional pilot — should make without thorough consultation with a qualified eye care professional and serious consideration of the potential risks and inevitable tradeoffs. Although the FAA and most major air carriers allow laser refractive surgery, professional aviators must consider how it could affect their occupational and certification status. As with any invasive procedure, you should understand both the risks and the benefits before electing to go forward. But if you do ... enjoy the view!

Susan Parson (susan.parson@faa.gov, or @avi8rix for Twitter fans) is editor of FAA Safety Briefing. *She is an active general aviation pilot and flight instructor.*

Learn More

Information for Pilots Considering Laser Eye Surgery (Publication OK-06-148)
http://www.faa.gov/pilots/safety/pilotsafetybrochures/media/lasereye_ii.pdf

SUSAN PARSON

Checklist

Form and Function

How the Pilot's Bill of Rights Affects Application for a Medical Certificate

You will find a new electronic form to sign as you prepare for your next visit to the Aviation Medical Examiner (AME) to renew your FAA medical certificate.

Why another form, and what might it be? As you have probably seen in the media, in August 2012, the President signed Public Law 112-153, more commonly known as the Pilot's Bill of Rights. In accordance with this law, the FAA's Aerospace Medical Certification Division is now required to provide applicants for a medical certificate with written notification(s) related to the investigation of the applicant's qualifications for an airman medical certificate.

What the FAA Must Provide

Here's the gist of it. In accordance with the new law, the FAA is required to tell you explicitly that the FAA will use the information you submit on the FAA Form 8500-8, Application for an Airman Medical Certificate, as part of the basis for issuing an airman medical certificate to you under Title 49, United States Code (USC) section 44703(a). The FAA must also "investigate" your qualifications (e.g., via the medical examination that the AME performs on behalf of the FAA). If the investigation shows you to be qualified and physically able to safely perform the duties associated with the level of medical certificate that you seek, the AME will issue the appropriate medical certificate.

As you know from previous reporting, the use of the online MedXPress application system is now mandatory. The MedXPress registration and application process now includes several statements required by the Pilot's Bill of Rights:

> *The nature of the Administrator's investigation, which is precipitated by your submission of this application, is to determine whether you meet the medical standards for airman medical certification under Title 14, Code of Federal Regulations (CFR) part 67.*

And, similar to the "Miranda rights" notification that you've seen on television shows, the FAA is also required to tell you that:

> *Any response to an inquiry by a representative of the Administrator by you in connection with this investigation of your qualifications for an airman medical certificate may be used as evidence against you.*

The notification you receive on MedXPress will also advise you that you may obtain a copy of the releasable portions of your airman medical file upon written request to the Aerospace Medical Certification Division (AMCD) in Oklahoma City.

What You Must Provide

As part of the MedXPress initial registration and application process, you will also need to complete a "Certification of Receipt" statement acknowledging that you have received written notification of your rights under the Pilot's Bill of Rights. If you decline to complete and electronically sign this part of the form, the system cannot continue to process or submit your application for a medical certificate.

If you're new to the MedXPress system, check out Tom Hoffmann's *Take the XPress Lane* primer on p. 20. It's fast, it's easy, and it will greatly facilitate your next application for an FAA medical certificate.

Susan Parson (susan.parson@faa.gov, or @avi8rix for Twitter fans) is editor of FAA Safety Briefing. *She is an active general aviation pilot and flight instructor.*

Learn More

Pilot's Bill of Rights
http://www.faa.gov/pilots/rights/

BY SUSAN PARSON

From FDA to FAA

How the FAA Evaluates Drugs for Aeromedical Use

In preparation for the private pilot flight training that I started in August 1991, earlier that summer I made my very first visit to an FAA Aviation Medical Examiner (AME) to acquire the necessary third-class medical and student pilot certificate ... a yellow-beige document that I still keep among the treasured souvenirs and mementos of my status as a certificated pilot. I upgraded the third-class medical to a second-class medical when I trained a few years later for my commercial pilot certificate. And, for the first 16 years of my aviation career, I was fortunate enough to breeze through both the many check-boxes on the FAA Airman Medical Application (FAA Form 8500-8, now exclusively online via MedXPress) and the exam itself.

That all changed in 2007, when I was diagnosed with a medical condition — multiple sclerosis — that made things a little more complicated. As is the case for any passionate pilot, one of my biggest and most immediate concerns was for the impact this annoying and most unwelcome development would have on my ability to hold an FAA medical certificate. Since I had always been able to take my health, and thus my eligibility for FAA medical certification mostly for granted, I had never had cause to investigate this issue. But now I was motivated!

I was immensely relieved to learn several things. First, the FAA's special issuance process — which the FAA medical staff has worked very hard to improve in the last few years — provides the means to certificate an astonishing range of medical conditions and limitations. My particular brand of MS (relapsing-remitting) is happily among the many certifiable conditions under the special issuance process, and so I threw myself into becoming an expert on what the FAA requires for special issuance.

That process also made me aware of the fact that, while there is a long list of potentially certifiable medical conditions and limitations, the list of allowable medications is somewhat more limited. Even more confounding was the fact that the FAA itself does not publish a list of such meds. Like many pilots, though, I was able to get the information I needed from one of the many aviation advocacy organizations that research this information with the FAA and maintain an "FAA-approved" pharmaceutical database for their members.

Why the Mystery on Meds?

So why does the FAA decline to make this all-important information directly available, and how does the FAA go about approving drugs in the first place? For answers, I went to Dr. Michael Berry, Manager of the Medical Specialties Division in the FAA's Office of Aerospace Medicine. This Division is responsible for a wide range of issues, including Aerospace Medicine policy and procedures regarding pilot medical certification, and medical clearances for air traffic control specialists, the evaluation and management of complex psychiatric cases and issues, and oversight of the agency employee drug and alcohol testing program.

"The first thing to understand is that the FAA does not 'approve' drugs," stresses Berry. "Our colleagues in the FDA [Food and Drug Administration] have that function." Rather, Berry and his staff evaluate medications to determine whether they can safely be used in the aviation environment. Another important point, says Berry, is that the FAA does not look at drugs alone. "Our primary concern is not just about the drug and its side effects, but also about the underlying medical condition it is intended to treat," he notes. A drug that successfully and effectively treats a particular condition on the ground may not be safe or suitable for use in the flying environment. "The airman's overall fitness and aviation safety are the guiding principles," says Berry, "and because we can sometimes approve medications for some conditions, but not for others, it's almost impossible to have a single policy that applies to all possible uses of a given drug. Again, it's about the drug's impact on the underlying medical condition as well as the effect on the individual, so we have to take almost a case-by-case approach."

That's partly why there is no "official" list of allowable medications, but Berry also points to other factors. "The number of possible medications and combinations is enormous, and there are new medications coming on the market frequently" he observes. The agency would need a much larger staff simply to develop such a document. Keeping it up to date would also be prohibitively resource-intensive. "There are so many different products out there, with so many different uses. New information emerges almost every day, and we are constantly re-evaluating our policies on the basis of that information." This ongoing evaluation creates changes in both directions. "Sometimes," says Berry, "we get adverse information about a drug's effects after we have accepted it for use in aviation, and we have occasionally had to withdraw our acceptance of that drug. At other times, new information acquired over several years of use persuades us that we can accept one we initially declined to allow."

The Regulations

The regulations are very clear about the FAA's expectations with respect to an airman's medical condition:

14 CFR 61.53 prohibits a person from acting as pilot in command or as a required pilot flight crew member while that person (1) "knows or has reason to know of any medical condition that would make the person unable to meet the requirements for the medical certificate necessary for the pilot operation"; or, (2) "Is taking medication or receiving other treatment for a medical condition that results in the person being unable to meet the requirements for the medical certificate necessary for the pilot operation."

14 CFR 91.17 states (a) No person may act or attempt to act as a pilot crewmember of a civil aircraft...(3) While using any drug that affects the person's faculties in any way contrary to safety.

How Long, and Which Ones?

The need for careful evaluation of a drug's effects is the reason for the FAA's general policy of waiting at least a year after a drug receives FDA approval before it will be considered for use by airmen. "The FDA obviously does extensive testing," observes Berry, but testing inherently involves only a small segment of a drug's target population. "We wait at least a year to let the FDA establish a more complete profile of benefits and side effects before we commit the resources required for aviation evaluation," he states.

And it is indeed a resource-intensive process. A small team of FAA physicians in Berry's Division make up the Pharmacy and Therapeutics Committee headed by Dr. Arleen Saenger, which looks at everything it can find, starting with the FDA label (i.e., officially approved uses), the FDA's research and reviews (including post-market safety reviews), academic research, and publications such as PubMed. Also of interest is the work and experience that foreign pharmaceutical and aeronautical authorities have had with a given combination of medical conditions and drugs. Once the Committee reaches consensus on the possible aeronautical use of a drug, Saenger makes a recommendation to Berry. The Federal Air Surgeon, Dr. Fred Tilton, has the final say.

Another important point on FAA resources: "There is simply no way we could evaluate every new drug that appears," notes Berry. Instead, the FAA chooses to evaluate a drug primarily when there appears to be an appropriate cost-benefit ratio. "If there are a number of airmen with a given condition who request acceptance of a new drug to treat that condition, there is obviously a benefit in committing the resources to review it."

How Do I Decide?

Berry stresses that the FAA's primary concern is whether the underlying medical condition being treated is compatible with safe flying, and then the safety of the medication being used. He also reiterates the wisdom of advice that some aviation advocacy groups offer their members: Even if the FAA allows a given medication for your condition, anyone taking a drug for the first time should conduct a "ground run" self-evaluation period for at least 48 hours before attempting to fly. The idea is to ensure that there are no unexpected adverse reactions. "There are wide variations in individual physiology," says Berry, which is one of the reasons that drug evaluation is a process that defies a simple or cookie-cutter approach.

Another important point: No matter how much you want to fly, your health has to come first. "The fact that the FAA allows some medications and not others will obviously be of interest to airmen, but never let that drive the decision," he counsels. "You and your doctor have to make whatever decision is best for your overall long-term health. And remember that things do change—new drugs are developed all the time, and new information may allow us to reconsider accepting drugs that we initially declined to permit for use in aviation."

Susan Parson (susan.parson@faa.gov, or @avi8rix for Twitter fans) is editor of FAA Safety Briefing. *She is an active general aviation pilot and flight instructor.*

Learn More

FAA Frequently Asked Questions (FAQs) web site
http://faa.custhelp.com/app/answers/detail/a_id/261

CAMI Pilot Safety Brochure "Medications and Flying"
www.faa.gov/pilots/safety/pilotsafetybrochures/media/Meds_brochure.pdf

Aeronautical Information Manual, Chp 8 Medical Facts for Pilots (medication section)
http://www.faa.gov/air_traffic/publications/media/AIM_Change_1.pdf

SABRINA WOODS

Nuts, Bolts, and Electrons

AMTs vs. OTCs

Understanding the Risk when Self-Medicating

You wake up from a restless night and it's there — the ominous tickle in the back of your throat. It is the first warning sign. It might be accompanied by a slightly stuffed up nose, or perhaps a general soreness in your lymph nodes and neck. Regardless, you know what is coming — you've been here before. You are getting sick.

But morning has come and you have work. So, like most people do, you reach for the medicine cabinet in attempt to arm yourself against the evil rhinoviruses that are invading your body. Maybe you will choose the latest in over-the-counter (OTC) antihistamines, or that popular bedtime, coughing, stuffed up, so-you-can-sleep medicine. Whatever you choose, as an aviation maintenance technician (AMT), you need to be aware of the hidden dangers of OTC medicines and what the risks might be on the job.

The guidelines for aircrew are explicit and, although the FAA does not publish a master list of approved medicines, 14 CFR prohibits flying while you have a condition or take a medication that might affect flight safety. Unfortunately, the guidance for ground and maintenance crews isn't as well defined, which often leaves the decision of medication usage up to the individual.

Labels and Lug Nuts

Rule number one of medication-taking: Always read the labels! The Food and Drug Administration (FDA) goes to great lengths to ensure that all drugs list indications (benefits) and contradictions (warnings) on their labels. In addition, labels must list active and inactive ingredients, dosages, and uses. The summation of these items can usually help you decide if a particular drug is worth considering when self-medicating. Studies show, however, that only about 54 percent of adults bother to read the official labeling on the back of the box. Instead, they defer to the more commercial advertising on the front. Those who do read labels often stop shortly after dosage and time requirements, and some note that they can't make sense of the lists even after reading them in their entirety. The FDA has acknowledged this issue and is working with pharmaceutical companies to ensure the labels are both prominently placed and easier to understand. As for the rest, that is up to you.

Going back to the previous scenario — you reach for the gel-tabs known for easing cold symptoms, and for your favorite pain-reliever. You flip over the cold medicine box and begin to read. You see that it is designed to ease a cough due to minor throat and bronchial irritation. It should also help relieve a headache, minor aches and pains, a fever, and a runny nose. This all sounds great and just what you need, so what should you do now? The answer is *read on*.

The Fine Print

You do, and you find that the active ingredients in the cold medicine are acetaminophen, dextromethorphan, and doxylamine succinate. The pain meds list acetaminophen as the primary ingredient. Normally, you would settle on taking a dose of each medicine, and hurry off to work hoping the meds hold until you can get back home and back to bed. However, as you read even further down the

Drug Facts

Active ingredient (in each tablet) — **Purpose**
Chlorpheniramine maleate 2 mg — Antihistamine

Uses temporarily relieves these symptoms due to hay fever or other upper respiratory allergies:
■ sneezing ■ runny nose ■ itchy, watery eyes ■ itchy throat

Warnings
Ask a doctor before use if you have
■ glaucoma ■ a breathing problem such as emphysema or chronic bronchitis
■ trouble urinating due to an enlarged prostate gland

Ask a doctor or pharmacist before use if you are taking tranquilizers or sedatives

When using this product
■ you may get drowsy ■ avoid alcoholic drinks
■ alcohol, sedatives, and tranquilizers may increase drowsiness
■ be careful when driving a motor vehicle or operating machinery
■ excitability may occur, especially in children

If pregnant or breast-feeding, ask a health professional before use.
Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.

Directions

adults and children 12 years and over	take 2 tablets every 4 to 6 hours; not more than 12 tablets in 24 hours
children 6 years to under 12 years	take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours
children under 6 years	ask a doctor

Other information store at 20-25° C (68-77° F) ■ protect from excessive moisture

Inactive ingredients D&C yellow no. 10, lactose, magnesium stearate, microcrystalline cellulose, pregelatinized starch

labels, you realize that this might not be the best plan after all.

Warnings on the cold medicine expressly discourage mixing it with another drug containing acetaminophen. Doing so could damage your liver. Next you read that you might incur marked drowsiness when taking this particular drug. A quick Internet search reveals that the active ingredient, doxylamine succinate, is an antihistamine that can encourage lethargy. This would be good news, and in fact desired if you were taking it before bed. However, you plan to work a full day, so being drowsy on the job is not an option. In fact, another warning on the label cautions against operating heavy machinery or driving. Your plan to install a new engine on a Cessna 182 that day certainly requires you to be at the top of your game. That decides it, and both medicines go back in the cabinet. So now what do you do? Are you left to brave the workday cloudy-headed and runny-nosed?

If it numbs the pain, then it probably numbs the brain and is therefore best avoided in the workplace.

Gotta Keep 'Em Separated

"The Offspring" lyrics aside, a great way to set yourself up for success is to organize your medicine cabinet beforehand, and to keep the contents separated. Keep a set of meds that will ease symptoms and encourage sleep — always a key factor in getting better — on one side of the cabinet, and the non-drowsy, work-friendly kind on the other. This way you always know which one to grab depending on what part of the day it is.

Prior to stocking your cabinet, review and discuss your choices with your health care provider to ensure that each medicine is right for you. The last thing you'll want is to use a drug that interacts negatively with something else you might be taking, or with any other ailments you might have. Medicinal interactions can fall into any of three harmful categories.

- *Duplication*: This means if you take two medicines that have similar active ingredients, you may get more of an ingredient than you need. Duplication with acetaminophen is a common example.
- *Opposition* (antagonism): This is when the active ingredients in different medicines have opposite effects on your body. For example, OTC decongestants can oppose certain medicines intended to lower your blood pressure, because decongestants may raise your blood pressure.
- *Alteration*: This is when a medicine may change the way your body absorbs, spreads, or metabolizes another medicine. For example, aspirin can change the way certain prescription blood thinning medicines work.

The Others

Awareness doesn't end with OTC meds. Some other hazards to be aware of include psychoactive drugs, such as anti-depressants or anti-anxiety medications. These types of prescription drugs are specifically designed to act upon the brain to cause changes in behavior, mood, and consciousness, which may be counterproductive on the job. The same holds true for psychostimulants, such as amphetamines or amphetamine-like drugs. Quite a few of these are an automatic "no-go" for operators and for air traffic controllers, but they bear consideration for ground crew or maintenance positions as well.

The same is true for the heavier duty pain relievers. Oral, injectable, and topical pain relievers, and in particular those containing opiates (e.g., codeine, oxycodone, morphine), bind to specific brain receptors that affect your perception of pain, ability to think clearly, mood, and muscle coordination. All of these can most certainly have an adverse effect at work — so much so that this is one of the categories that maintenance companies and agencies, to include the Department of Transportation and the FAA, screen for in mandatory drug testing.

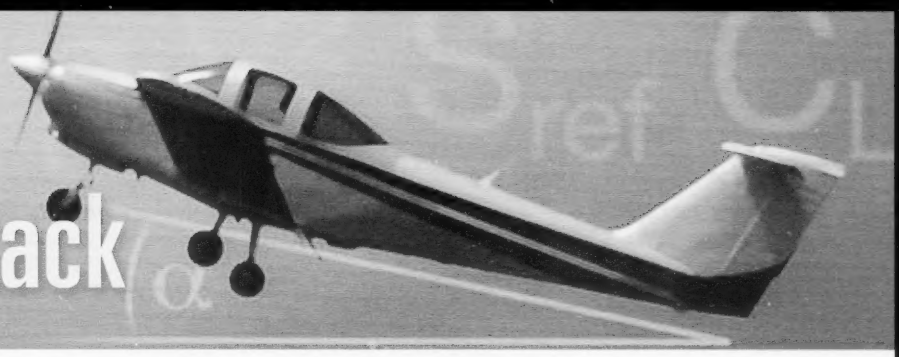
Dr. Michael Berry is the Manager of the Medical Specialties Division in the FAA's Office of Aerospace Medicine. This Division is responsible for a wide range of issues, including policies and procedures regarding pilot medical certification and medical clearances for ATC specialists, the evaluation and management of complex psychiatric cases and issues, and oversight of the agency employee drug and alcohol testing program.

His advice is that if it numbs the pain, then it probably numbs the brain. That means it is best to be avoided in the workplace. Although the consequence of a poorly executed maintenance action might not be as immediate or apparent as it could be in the flight operations arena, it is still a hazard. And it is your responsibility to ensure that the strongest and most capable tool in your crib — *your brain* — is alert and at its best.

Sabrina Woods is an assistant editor for the FAA Safety Briefing. *She spent 12 years in the active duty Air Force where she served as an aircraft maintenance officer and an aviation mishap investigator.*

SABRINA WOODS

Angle of Attack



Flying Healthy: A Hazard IS your Health

Picture it. Clear, blue, and "CAVU" on a beautiful spring day. Perfect flying weather. You wait patiently and watch as the *Skyhawk* ahead of you starts its takeoff roll, heads down the runway, and climbs into the air. All is not well, however, and it is soon apparent that the aircraft is in distress. You watch in horror as it suddenly snaps left, noses over, and impacts the ground just past the runway. After the subsequent investigation you find out that shortly after takeoff, the pilot experienced sudden cardiac arrest, leaving her unable to maintain control of her aircraft.

Although identifying details have been altered slightly, this is a real event. It is listed under the National Transportation Safety Board (NTSB) aviation accident qualifier "medical incapacitation," and the truly alarming fact is that it is not a unique scenario. In addition to the NTSB database, the Civil Aerospace Medical Institute (CAMI) maintains a database that records information on pilots who suffer a medical impairment or incapacitation in flight. This information includes pilot demographics (age, gender, flight time), medical certificate information (class, pathology codes, special issuance), and event information (origin, injury status, NTSB-cited probable cause). Both databases list several events almost identical to this one.

Heart attacks, strokes, acute arrhythmia, and sudden loss of consciousness due to diabetic shock — these are all incapacitating circumstances that have caused general aviation accidents, and on more than one occasion, passengers were involved.

This understandably unnerving information is not written with the intent to alarm or scare anyone, but rather to elicit understanding and awareness about a very important issue: your health.

Flying can be a stressful event. Studies have shown that the most stressful aspects of flying are takeoff and landing. Coincidentally, these are also the two stages of flight that have the highest propensity for mishap. These are the times when the mental and physical effort required for successful execution can be at its most demanding. The heart rate and blood pressure elevate slightly. Breathing becomes heavier. The mind is constantly trying to absorb, interpret, and act upon information it receives. In a perfectly healthy individual these are minor changes to the body's biomechanics that will regulate themselves in time with no adverse effects. For a person with a pre-existing condition, however, this can become the catalyst for a significant, and potentially debilitating, medical event.

Since 1996 there have been over 190 recorded cases of incapacitation or impairment in the cockpit, resulting in 132 accidents and 115 pilot fatalities. Sifting through one sobering report after another, I found that most cited known, pre-existing conditions prior to the accident occurring. One particular incident noted that the pilot had a history of coronary artery disease, hypertension, lymphoma, *and* diabetes, and was currently under deferment for review for issuance of a new medical certificate. And yet he stepped to his aircraft that day and chose to fly.

A Hazard is your Health

Now I am not advocating that you hang up your flying-ace goggles and silk scarf simply because you have a little bit of hypertension. What I *am* advocating is that you know your body. Know and respect the parameters of your particular ailment and what it might entail as it progresses. Identify how certain medical conditions may or may not preclude you from taking part in flight activities. Before you fly, understand the ramifications of taking certain medications and, in particular, their timeframes.

The questions you need to ask yourself are: What if a known side-effect occurs in flight? Are you ready to handle the situation? Or, conversely: What if your meds run out in flight?

Discuss any concerns you might have with your primary health manager and your AME. Be honest with your physicians and with yourself. Confront your situation with an informed determination to make the best, and more importantly, *safe*, decision. A careful and honest health assessment prior to flight is a hallmark of good risk management. Don't let the hazard be your health.

Sabrina Woods is an assistant editor for the FAA Safety Briefing. *She spent 12 years in the active duty Air Force where she served as an aircraft maintenance officer and an aviation mishap investigator.*

MATT RIGSBY

Vertically Speaking

Tired of Fatigue

Humans are designed to be awake during the hours of light and to sleep during periods of darkness. In scientific terms, this is called the body's natural clock, or circadian rhythm. Disturbances to the established circadian rhythm can reduce mental and physical performance, which can be described in one word — FATIGUE.

I'm tired of seeing fatigue as a factor in so many of the accidents I investigate as part of my work. Let me tell you about one of them, which involved a friend I will call "Sam." I did not know Sam was involved in the accident when I received the assignment. As I walked up to the wreckage, I made an initial assessment of the helicopter's condition. The rotor and transmission had separated from the aircraft. Then I turned and saw Sam and his student. They were not injured physically, but both were sitting on the ground in a shock-like state. The first thing Sam said to me was: "Matt, I knew I should not have been flying, but I did it anyway." A momentary lapse in judgment left no one at the controls during a three-foot hover, and the rest is history.

What leads to that kind of lapse in judgment? Mental and physical fatigue. Sam was going through a divorce, a bitter custody battle, and financial troubles. He had moved out of his primary residence, had a recent job transfer, and was dealing with the death of a close family member. Oh, and he also had a sinus infection. Life's many developments had taken their toll on Sam.

One of the worst places for a fatigue-related accident is in the Helicopter Emergency Medical Services (HEMS) world, which includes high demands and pressure to move quickly. For both pilots and mechanics, HEMS is a unique helicopter operation. Pilots fly most operations alone and predominately under visual flight rules (VFR). They generally work 12-hour day or night shifts. Medical crews typically work 24-hour-plus shifts. Fatigue can be a significant factor in job performance, so HEMS work needs to incorporate plenty of fatigue risk management methods. As you may know, the FAA regulates requirements for pilot flight duty and rest, but the agency has no jurisdiction over the medical crew's duty and rest times. Advisory Circular AC00-64, Air Medical Resource Management, provides guidance for initial and recurrent training of air medical transport crew members.

The Aeronautical Decision Making (ADM) chapter in the FAA's Pilot Handbook of Aeronautical Knowledge (http://go.usa.gov/Yz4H) calls out the IMSAFE checklist, something readers of this column may have seen previously.

1. Illness — Am I sick?
2. Medication — Am I taking medicines that might affect my judgment or make me drowsy?
3. Stress — Am I under psychological pressure from the job? Do I have money, health or family problems? Stress causes concentration and performance problems.
4. Alcohol — Have I been drinking within eight hours? Within 24 hours? As little as one ounce of liquor, one bottle of beer, or four ounces of wine can impair flying skills.
5. Fatigue — Am I tired? Fatigue continues to be one of the most insidious hazards to flight safety, as it may not be apparent to a pilot until serious errors are made.
6. Eating — Have I eaten enough to keep me adequately nourished during the entire flight?

Most pilots, mechanics, and flight crews are task oriented and want to get the job done no matter what we have going on in our lives. Everyone working in the aviation industry should use the IMSAFE risk mitigation strategy. As the name suggests, it could make the difference between a safe flight, and "I knew I should not be flying, but I did it anyway."

Matt Rigsby is a transportation industry officer and accident investigator in the FAA Rotorcraft Directorate. He is an A&P as well as a fixed and rotary wing pilot, who has worked in the helicopter community for 20 years. He has participated in more than 90 helicopter field accident investigations, both domestically and internationally.

Flight Forum

Automotive Gas

My airplane and engine are STC'd to use unleaded automotive gasoline. The STC is very clear that all fuel must be free of alcohol of any kind. Why can't we develop a ready source of ethanol-free automotive gasoline for all the low compression piston engines in the fleet? I have read that 60 percent of all GA piston aircraft are auto fuel STC eligible. When I learned to fly there was 80 octane (red) and 100 octane (blue) avgas available. All us low performance guys used the red fuel, and the high performance guys paid more for the 100 octane. We could let the low performance aircraft run alcohol-free auto fuel, and the high performance aircraft could run "Swift Fuel" or whatever.

— Steve

As you stated, the FAA has approved Supplemental Type Certificates (STCs) for operation with ethanol-free autogas on certain aircraft and engines. We have also worked with industry to approve other low or medium octane unleaded fuels, such as UL91, UL94, and UL82. As you noted, these unleaded fuels are not high octane fuels, and they do not provide the performance necessary for safe operation of high performance aircraft which burn most of the fuel and have the highest utilization. There is apparently an insufficient market demand to support the production levels and distribution infrastructure that is necessary to make ethanol-free autogas and these other fuels available at airports. Currently, 100LL is available and entrenched at all airports, and there are no driving forces to replace it with any alternate, including ethanol-free autogas. No other gasoline can satisfy the entire fleet of engines and aircraft, and most airports are currently only equipped to provide one fuel. The FAA Tech Center has conducted extensive research to identify a "drop in" unleaded replacement for 100LL, and has supported other research to identify octane requirements of the GA fleet. Through the sponsorship of the Unleaded Avgas Transition Aviation Rulemaking Committee (UAT ARC) and the establishment of the Fuels Program Office to implement recommendations, we will continue to provide a leadership role in the search for the "best" unleaded replacement for 100LL avgas. We are also collaborating with the EPA to support the transition to unleaded avgas. I hope this helps and thank you for reading!

PEGASAS Program

Can you give me the name of someone I can talk to about working with the Partnership to Enhance General Aviation Safety, Accessibility and Sustainability (PEGASAS) program? I am a 70-year old pilot, aircraft owner, electrical and mechanical engineer, computer geek, etc. I am intensely interested in GA safety, especially in the areas of aging aircraft maintenance and in the human-machine interface.

— Bill

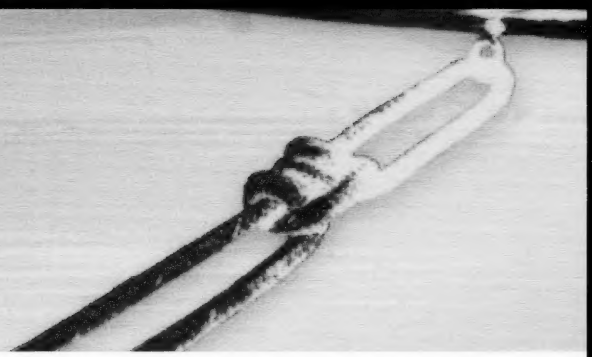
We are thrilled you have such interests and that you are willing to contribute your experience to the program. Please contact Holly Baker at (609) 485-6253 and she can get you each individual university's program lead and contact information.

FAA Safety Briefing welcomes comments. We may edit letters for style and/or length. If we have more than one letter on a topic, we will select a representative letter to publish. Because of publishing schedule, responses may not appear for several issues. While we do not print anonymous letters, we will withhold names or send personal replies upon request. If you have a concern with an immediate FAA operational issue, contact your local Flight Standards District Office or air traffic facility. Send letters to: Editor, *FAA Safety Briefing*, AFS-805, 800 Independence Avenue, SW, Washington, DC 20591, or e-mail SafetyBriefing@faa.gov.

Let us hear from you—comments, suggestions, and questions: e-mail SafetyBriefing@faa.gov or use a smartphone QR reader to go "VFR-direct" to our mailbox.

SUSAN PARSON

Postflight



Getting to "Yes"

"We are all just one medical event away from flying as sport pilots."

A pilot friend made that statement at a conference several years ago and, like most everyone else in the audience, I nodded sagely (or was it smugly?) while I thought sympathetically of those who could "only" fly with the driver's license medical.

Little did I know that life was about to give me a visceral appreciation for that statement — and even greater appreciation for the many medical certification options available to today's pilots. Ironically, it was just after that week that a subtly accumulating collection of odd symptoms finally drove me to the doctor, and eventually to a diagnosis of multiple sclerosis (MS).

My aviation friends all understood that my most immediate concern was not so much about the potentially dire consequences of the disease itself. Its implications for my FAA medical certification were the real source of the early tears and terror. Lucky for me, several pilot pals (one of whom preceded me into the "MS Pilot Club") knew that MS didn't have to spell the end of my PIC flying days. In addition to handing me hankies, they provided solid information and support as I began to navigate this strange new world of health and aeromedical management.

After eight years of working at FAA headquarters, I've heard most of the jokes and snide comments about this agency. Having also attended several years' worth of the Administrator's meetings with air show audiences, I've also heard lots of the frustration that pilots experience when medical issues result in delays or (occasionally) denial of the vital medical certification. I get it — even though I worked for the FAA, I knew nothing about the people or processes involved in special issuance, and I was terrified of being ground into the gears of the medical bureaucracy. What I quickly learned, though, is that the people who count — that would be Federal Air Surgeon Dr. Fred Tilton and his team, many of whom are pilots themselves — get it, too.

A particularly tough job belongs to the head of the Aerospace Medical Certification Division (AMCD), headed until recently by Dr. Warren Silberman (since retired) and now by Dr. Courtney Scott. Working for the FAA has given me the privilege of coming to know them not as names on a web page but as people, and I can assure you that they are people who *care*. Like everyone, the folks at AMCD are bound by the regulations. Their work and their decisions have profound implications not just for pilots, but for the public ... that is by no means an abstraction. You might not realize the extent to which aeromedical decisions are reviewed and second-guessed even in "routine" accidents. That level of scrutiny by the National Transportation Safety Board (NTSB), the press, the public, and sometimes even Congress, goes off the charts when an accident involves a public figure (think Ted Stevens or Cory Lidle).

In that context, it is even more impressive and heartening to know that, contrary to the jokes and fears and snide comments, the FAA's medical mindset is not a knee-jerk "no." Rather, Tilton, Scott, and the dedicated folks who work for them are all about getting to "yes." Just as in the Roger Fisher and William Ury book on *Getting to Yes*, which offers a toolbox for negotiating mutually acceptable outcomes, the FAA's medical professionals have developed a wide range of options for medical certification of many conditions that would have once grounded pilots for good. Even more encouraging is the fact that aeromedical research continues to broaden both the list of certifiable conditions and options for demonstrating compliance with medical certification standards. Yes, there are still occasions and conditions that require the FAA to say "no." But it is increasingly uncommon to find cases that are permanently impossible to certify. In all other cases, the FAA medical team is more than willing to work with airmen and AMEs to find a path to certification.

Thank you, colleagues, for all you do to help keep so many of us flying.

Susan Parson (susan.parson@faa.gov, or @avi8rix for Twitter fans) is editor of FAA Safety Briefing. *She is an active general aviation pilot and flight instructor.*

Dr. Courtney Scott

Manager, Aerospace Medical Certification Division

Dr. Courtney Scott's interest in medicine started after graduating from the U.S. Merchant Marine Academy and serving as a second and third mate on transport ships traversing the Pacific Ocean to Vietnam and back. Merchant ships typically do not have any trained medical staff onboard, so the responsibility to take care of any medical issue fell to the deck officers.

"Over time I found the medical challenges that I was faced with to be really interesting," said Scott. "As the war wound down, I was blessed with the opportunity to go to medical school."

Scott then spent several years as a general practitioner in a rural community where he did everything from delivering babies to taking care of nursing home patients. But the experience and challenges at sea — and six hurricanes — fostered a need for something different.

"In conventional medicine we take care of people who have or may develop abnormal conditions or illnesses, but in the setting of a normal environment. In classical aerospace medicine we take care of 'normal' people in the very 'abnormal' environment of air and space."

Scott signed up as a flight surgeon in the U.S. Air Force and spent around a thousand hours flying on various aircraft. He served in several command positions including the chief of physical standards for the Air Force. After 22 years on active-duty, Scott jumped on a new opportunity to continue to serve in the area of aeromedical certification through FAA.

"Aerospace medicine and medical certification are my roots, and I love this job."

Substantial experience with all the stresses that a pilot goes through — physiologically and mentally — help Scott make complex aeromedical decisions required to manage FAA's Aerospace Medical Certification Division. The division is responsible for medical certification on behalf of the Federal Air Surgeon.

Medical conditions have been involved in a number of aircraft mishaps, which makes certification a critical function in aviation safety.

"Our role is to identify those medical conditions, including their treatment (especially medications) that may have adverse impacts on aviation safety."

If the conditions can be appropriately managed, FAA can work to assist the airman in understanding what they need to be considered for a waiver that would allow them to continue flying.

"Our first and foremost obligation is to safety, but beyond that we do everything we can to enable the airman to fly."

A common myth within the general aviation community is that FAA is simply looking for reasons to ground airmen. Scott and the division see themselves in partnership with airmen to mutually safeguard the airspace. In this partnership, the airman should understand that medical factors are an important part of safety, and all parties must take responsibility.

Paul Cianciolo is an assistant editor and the social media lead for FAA Safety Briefing. *He is a U.S. Air Force veteran, and a rated aircrew member and search and rescue team leader with the Civil Air Patrol.*

U.S. Department
of Transportation

**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

FORWARDING SERVICE REQUESTED

Official Business
Penalty for Private Use $300

www.faa.gov/news/safety_briefing/

Look Who's Reading FAA Safety Briefing ...

For show-stopping safety performance, pilot, actor, and comedian Dave Coulier reads FAA Safety Briefing.